Different Types of Magic Squares of Orders 6, 8, 10 and 12, **Zenodo**, November 07, 2023, pp. 1-41, *https://doi.org/10.5281/zenodo.10080859*

Different Types of Magic Squares of Orders 6, 8, 10 and 12

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The work is also available with pdf file at author's sites:

https://numbers-magic.com/?p=2576

https://numbers-magic.com/?p=2598

Abstract

It is revised version of author's previous work [44]. It brings new ideas of construction of magic squares. This work is for the even orders 6, 8, 10 and 12. The new ideas used to bring these magic square are: ***bordered magic rectangles, bordered double digits magic rectangles, cornered magic rectangles, striped magic rectangles****, etc. When the length and width are equal these becomes as magic squares. Another idea used is of algebraic formula* $(a+b)^2$*. Here we consider small blocks of magic squares and magic rectangles, such as* a^2*,* b^2*,* $a\times$ *and* $b \times a$*. We are able to bring 6 magic squares of order 6, 30 magic squares of order 8, 175 magic squares of order 10 and 634 magic squares of order 12. These are available in author's site, whose links are given above.*

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Contents

1 Introduction

In this work, we shall bring magic squares of orders 6, 8, 10 and 12. There are written in different styles and designs. Moreover, these are based on different kinds of new aspects of magic rectangles. These includes:

(i) Bordered Magic Rectangles.

(ii) Bordered Double Digits Magic Rectangles.

(iii) Cornered Magic Rectangles.

(iv) Striped Magic Rectangles.

(v) Algebraic Formula Type $(a+b)^2$.

The above items are not known in the literature of magic squares. These are author's recent ideas in construction of magic squares. Let's understand one by one the above 5-items.

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1.1 Bordered Magic Rectangle

Bordered magic squares are well known in the literature. See below an example of **bordered magic square** of order 10.

										505
91	84	86	98	18	16	14	4	2	92	505
13	26	20	80	82	69	31	71	25	88	505
11	23	64	62	35	68	36	38	78	90	505
7	24	34	49	54	43	56	67	77	94	505
1	29	40	44	55	50	53	61	72	100	505
89	79	42	58	45	52	47	59	22	12	505
93	74	60	51	48	57	46	41	27	8	505
95	73	63	39	66	33	65	37	28	6	505
96	76	81	21	19	32	70	30	75	5	505
9	17	15	3	83	85	87	97	99	10	505
505	505	505	505	505	505	505	505	505	505	505

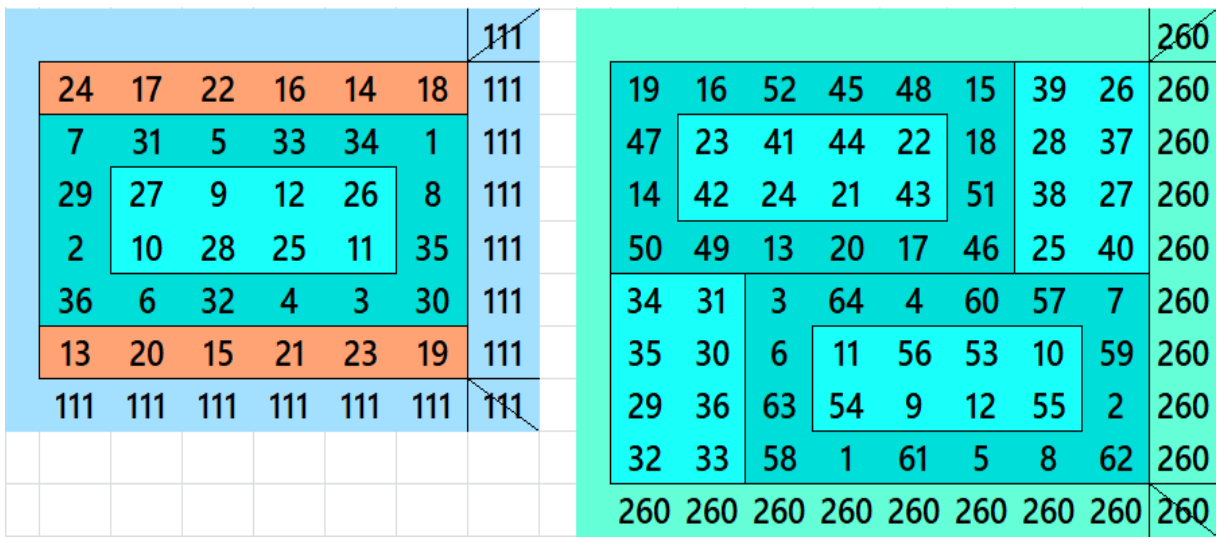
Bordered magic rectangles are not very well known in the literature. See below two examples:

Example 1.1. *Below are two examples of* ***bordered magic rectangle*** *of orders* 6×10 *and* 8×10

10	56	2	14	49	8	6	54	58	48	305
57	43	16	24	20	17	46	38	40	4	305
1	19	32	31	35	25	33	27	42	60	305
50	39	29	30	26	36	28	34	22	11	305
52	21	45	37	41	44	15	23	18	9	305
13	5	59	47	12	53	55	7	3	51	305
183	183	183	183	183	183	183	183	183	183	

7	4	9	80	78	69	65	14	68	11	405
76	26	19	63	17	60	54	61	24	5	405
8	23	51	35	48	29	31	49	58	73	405
75	53	34	42	40	37	43	47	28	6	405
2	59	45	39	41	44	38	36	22	79	405
15	25	32	46	33	52	50	30	56	66	405
71	57	62	18	64	21	27	20	55	10	405
70	77	72	1	3	12	16	67	13	74	405
324	324	324	324	324	324	324	324	324	324	

These are known as single digit **bordered** magic rectangles. More **bordered magic rectangles** of similar kind can be constructed using H. White's [1] software. The idea of this work is to use similar kind of small **bordered magic rectangles** to bring magic squares. See below two examples of orders 6 and 10:



24	17	22	16	14	18	111
7	31	5	33	34	1	111
29	27	9	12	26	8	111
2	10	28	25	11	35	111
36	6	32	4	3	30	111
13	20	15	21	23	19	111
111	111	111	111	111	111	111

19	16	52	45	48	15	39	26	260
47	23	41	44	22	18	28	37	260
14	42	24	21	43	51	38	27	260
50	49	13	20	17	46	25	40	260
34	31	3	64	4	60	57	7	260
35	30	6	11	56	53	10	59	260
29	36	63	54	9	12	55	2	260
32	33	58	1	61	5	8	62	260
260	260	260	260	260	260	260	260	260

1.2 Bordered Double Digits Magic Rectangles

Above we explained above the bordered magic rectangles are of single digit borders. Here we shall bring double digits bordered magic rectangles. See below few examples.

Example 1.2. *Below is an example of* ***double digit bordered magic rectangle*** *of order* 6×14*:*

11	8	7	71	5	70	69	73	84	23	26	63	13	72	595
74	77	78	14	80	15	16	12	1	62	59	22	76	9	595
66	19	52	42	50	40	41	47	34	37	36	46	24	61	595
65	20	33	43	35	45	44	38	51	48	49	39	57	28	595
10	75	81	27	68	67	21	53	30	3	25	2	79	54	595
29	56	4	58	17	18	64	32	55	82	60	83	6	31	595
255	255	255	255	255	255	255	255	255	255	255	255	255	255	

The magic rectangle of width 2 are of equal sums. See below:

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11	8	7	71	5	70	69	73	84	23	26	63	510
74	77	78	14	80	15	16	12	1	62	59	22	510
85	85	85	85	85	85	85	85	85	85	85	85	
81	27	68	67	21	53	30	3	25	2	79	54	510
4	58	17	18	64	32	55	82	60	83	6	31	510
85	85	85	85	85	85	85	85	85	85	85	85	
			13	72	85		66	19	85			
			76	9	85		65	20	85			
			24	61	85		10	75	85			
			57	28	85		29	56	85			
			170	170			170	170				

Example 1.3. *Below is an another example of* ***double digit bordered magic rectangle*** *of order* 10×12*:*

108	4	10	106	19	96	100	103	36	23	109	12	726
13	117	111	15	102	25	21	18	85	98	116	5	726
20	101	43	81	70	42	82	45	50	71	120	1	726
91	30	78	40	51	79	39	76	37	84	31	90	726
89	32	54	67	57	60	63	62	75	46	9	112	726
104	17	55	66	64	61	58	59	80	41	86	35	726
34	87	65	56	83	48	72	47	44	69	11	110	726
114	7	68	53	38	73	49	74	77	52	2	119	726
3	118	6	14	93	22	97	95	27	113	105	33	726
29	92	115	107	28	99	24	26	94	8	16	88	726
605	605	605	605	605	605	605	605	605	605	605	605	

The magic rectangle of width 2 are of equal sums. See below:

108	4	10	106	19	96	100	103	36	23	605
13	117	111	15	102	25	21	18	85	98	605
121	121	121	121	121	121	121	121	121	121	
6	14	93	22	97	95	27	113	105	33	605
115	107	28	99	24	26	94	8	16	88	605
121	121	121	121	121	121	121	121	121	121	

20	101	121
91	30	121
89	32	121
104	17	121
34	87	121
114	7	121
3	118	121
29	92	121
484	484	

109	12	121
116	5	121
120	1	121
31	90	121
9	112	121
86	35	121
11	110	121
2	119	121
484	484	

43	81	70	42	82	45	363
78	40	51	79	39	76	363
121	121	121	121	121	121	
83	48	72	47	44	69	363
38	73	49	74	77	52	363
121	121	121	121	121	121	

54	67	121		
55	66	121		
65	56	121		
68	53	121		
242	242			
			57	60
			64	61
			121	121

50	71	121
37	84	121
75	46	121
80	41	121
242	242	
63	62	242
58	59	242
121	121	

Based on same idea below are two different ways of writing magic square of order 8.

								260
3	1	63	61	60	58	8	6	260
62	64	2	4	5	7	57	59	260
17	48	31	36	25	38	21	44	260
20	45	26	37	32	35	24	41	260
47	18	40	27	34	29	43	22	260
46	19	33	30	39	28	42	23	260
53	55	9	11	16	14	50	52	260
12	10	56	54	49	51	15	13	260
260	260	260	260	260	260	260	260	260

								260
12	57	56	4	2	64	46	19	260
53	8	9	61	63	1	47	18	260
14	51	31	36	25	38	59	6	260
50	15	26	37	32	35	5	60	260
48	17	40	27	34	29	16	49	260
62	3	33	30	39	28	22	43	260
11	54	45	44	24	23	52	7	260
10	55	20	21	41	42	13	58	260
260	260	260	260	260	260	260	260	260

1.3 Cornered Magic Rectangles

Above we explained **bordered magic rectangles** in two different ways. One with single digits borders and another with double digit borders.are of single digit borders. Here we shall bring idea of cornered magic rectangles. We shall use same idea of equal sums double digits as in case of bordered double digits but in a little different aspect. See below two examples.

Example 1.4. *Below is an example of* ***cornered magic rectangle*** *of order* 6×10*:*

32	33	31	27	35	25	17	44	51	10	305
29	28	30	34	26	36	39	22	12	49	305
16	23	21	18	37	42	46	41	50	11	305
45	38	40	43	24	19	20	15	2	59	305
58	1	13	55	4	9	8	56	54	47	305
3	60	48	6	57	52	53	5	14	7	305
183	183	183	183	183	183	183	183	183	183	

32	33	31	27	35	25	17	44	244
29	28	30	34	26	36	39	22	244
16	23	21	18	37	42	46	41	244
45	38	40	43	24	19	20	15	244
122	122	122	122	122	122	122	122	

32	33	31	27	35	25	183
29	28	30	34	26	36	183
61	61	61	61	61	61	

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Example 1.5. *Below is an example of* ***cornered magic rectangle*** *of order* 10×18*:*

86	94	88	81	96	82	98	92	97	91	104	77	115	66	148	33	157	24	1629
95	87	93	100	85	99	83	89	84	90	74	107	62	119	34	147	168	13	1629
112	113	70	72	101	71	73	75	78	114	105	102	117	64	154	27	6	175	1629
69	68	111	109	80	110	108	106	103	67	79	76	128	53	31	150	22	159	1629
129	59	55	130	124	120	65	54	49	50	121	125	63	123	139	42	15	166	1629
52	122	126	51	57	61	116	127	132	131	60	56	58	118	48	133	176	5	1629
45	30	146	43	46	137	39	143	41	153	29	144	141	32	134	145	174	7	1629
136	151	35	138	135	44	142	38	140	28	152	37	40	149	36	47	17	164	1629
25	10	12	165	2	20	163	180	4	172	158	8	170	19	21	155	167	178	1629
156	171	169	16	179	161	18	1	177	9	23	173	11	162	160	26	3	14	1629
905	905	905	905	905	905	905	905	905	905	905	905	905	905	905	905	905	905	

86	94	88	81	96	82	98	92	97	91	104	77	115	66	148	33	1448		
95	87	93	100	85	99	83	89	84	90	74	107	62	119	34	147	1448		
112	113	70	72	101	71	73	75	78	114	105	102	117	64	154	27	1448		
69	68	111	109	80	110	108	106	103	67	79	76	128	53	31	150	1448		
129	59	55	130	124	120	65	54	49	50	121	125	63	123	139	42	1448		
52	122	126	51	57	61	116	127	132	131	60	56	58	118	48	133	1448		
45	30	146	43	46	137	39	143	41	153	29	144	141	32	134	145	1448		
136	151	35	138	135	44	142	38	140	28	152	37	40	149	36	47	1448		
724	724	724	724	724	724	724	724	724	724	724	724	724	724	724	724			

86	94	88	81	96	82	98	92	97	91	104	77	115	66	1267
95	87	93	100	85	99	83	89	84	90	74	107	62	119	1267
112	113	70	72	101	71	73	75	78	114	105	102	117	64	1267
69	68	111	109	80	110	108	106	103	67	79	76	128	53	1267
129	59	55	130	124	120	65	54	49	50	121	125	63	123	1267
52	122	126	51	57	61	116	127	132	131	60	56	58	118	1267
543	543	543	543	543	543	543	543	543	543	543	543	543	543	

86	94	88	81	96	82	98	92	97	91	104	77	1086
95	87	93	100	85	99	83	89	84	90	74	107	1086
112	113	70	72	101	71	73	75	78	114	105	102	1086
69	68	111	109	80	110	108	106	103	67	79	76	1086
362	362	362	362	362	362	362	362	362	362	362	362	

86	94	88	81	96	82	98	92	97	91	905	
95	87	93	100	85	99	83	89	84	90	905	
181	181	181	181	181	181	181	181	181	181		

From above examples, we observe that when we remove external double digits borders only in two-sides, still we

areleft with **cornered magic rectangles**. Sometimes these kinds of **cornered magic rectangles**, we call as **embedded** or **nested cornered magic rectangles**.

More studies on above three types of **magic rectangles** are available at [90]. To calculate these **magic rectangles** using software refer H. White's [1] download page

1.4 Striped Magic Rectangles

We observe from double digits magic rectangles that any order magic rectangles with width 2 are always magic rectangles, i.e., these are of magic rectangles of type 2×4, 2×6, 2×8, etc. But this property is not true for the cornered magic rectangles. Below are few examples where we have cornered magic rectangles with the property that order multiple of two is always a magic rectangle. See below two exaples.

Example 1.6. *Below is an example of a* ***striped cornered magic rectangle*** *of order* 6×14*:*

52	47	40	37	42	36	41	50	34	46	58	27	12	73	595
33	38	45	48	43	49	44	35	51	39	60	25	74	11	595
26	66	32	64	65	31	22	28	61	30	29	56	4	81	595
59	19	53	21	20	54	63	57	24	55	23	62	78	7	595
71	69	72	5	6	67	70	3	68	2	1	76	77	8	595
14	16	13	80	79	18	15	82	17	83	84	9	10	75	595
255	255	255	255	255	255	255	255	255	255	255	255	255	255	

The sums are as follows:

71	69	72	5	6	67	70	3	68	2	1	76	510		12	73	85		58	27	85
14	16	13	80	79	18	15	82	17	83	84	9	510		74	11	85		60	25	85
85	85	85	85	85	85	85	85	85	85	85	85			4	81	85		29	56	85
														78	7	85		23	62	85
26	66	32	64	65	31	22	28	61	30	425				77	8	85		170	170	
59	19	53	21	20	54	63	57	24	55	425				10	75	85				
85	85	85	85	85	85	85	85	85	85					255	255					
52	47	40	37	42	36	41	50	34	46	425										
33	38	45	48	43	49	44	35	51	39	425										
85	85	85	85	85	85	85	85	85	85											

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Example 1.7. *Below is an example of another* ***striped cornered magic rectangle*** *of order* 10×12*:*

59	61	64	58	68	53	73	48	86	35	18	103	726
62	60	57	63	50	71	76	45	24	97	108	13	726
72	65	54	51	69	52	46	75	22	99	8	113	726
49	56	67	70	55	66	41	80	98	23	104	17	726
74	84	81	39	42	43	44	77	29	92	102	19	726
47	37	40	82	79	78	83	38	34	87	15	106	726
90	26	33	96	94	32	85	28	91	30	115	6	726
31	95	88	25	27	89	36	93	100	21	114	7	726
109	116	2	118	1	4	112	16	107	20	11	110	726
12	5	119	3	120	117	9	105	14	101	10	111	726
605	605	605	605	605	605	605	605	605	605	605	605	

The sums are as follows:

109	116	2	118	1	4	112	16	107	20	605		18	103	121		86	35	121		73	48	121		68	53	121
12	5	119	3	120	117	9	105	14	101	605		108	13	121		24	97	121		76	45	121		50	71	121
121	121	121	121	121	121	121	121	121	121			8	113	121		22	99	121		46	75	121		69	52	121
												104	17	121		98	23	121		41	80	121		55	66	121
90	26	33	96	94	32	85	28	484				102	19	121		29	92	121		44	77	121		242	242	
31	95	88	25	27	89	36	93	484				15	106	121		34	87	121		83	38	121				
121	121	121	121	121	121	121	121					115	6	121		91	30	121		363	363					
												114	7	121		100	21	121								
74	84	81	39	42	43	363						11	110	121		484	484									
47	37	40	82	79	78	363						10	111	121												
121	121	121	121	121	121							605	605													
72	65	54	51	242		59	61	64	58	242																
49	56	67	70	242		62	60	57	63	242																
121	121	121	121			121	121	121	121																	

Based on above idea below are two examples of **striped magic squares**

13	88	93	8	68	33	69	23	38	72	505
18	83	95	6	40	61	32	78	63	29	505
85	16	5	96	30	71	54	47	22	79	505
87	14	7	94	44	57	48	53	58	43	505
84	17	90	11	80	21	49	52	59	42	505
20	81	10	91	34	67	46	55	74	27	505
82	19	92	9	73	28	56	45	60	41	505
15	86	12	89	35	66	50	51	36	65	505
1	99	98	4	77	62	37	26	25	76	505
100	2	3	97	24	39	64	75	70	31	505
505	505	505	505	505	505	505	505	505	505	505

59	85	88	58	92	53	41	104	110	35	126	19	870
86	60	57	87	50	95	100	45	34	111	18	127	870
96	54	89	51	55	90	44	101	22	123	8	137	870
49	91	56	94	93	52	107	38	122	23	128	17	870
98	108	105	43	39	42	97	48	29	116	132	13	870
47	37	40	102	106	103	46	99	24	121	15	130	870
114	28	32	120	118	33	109	26	115	30	139	6	870
31	117	113	25	27	112	36	119	124	21	10	135	870
133	140	1	142	2	4	136	16	20	131	11	134	870
12	5	144	3	143	141	9	129	125	14	138	7	870
79	82	74	61	65	72	78	68	69	75	83	64	870
66	63	71	84	80	73	67	77	76	70	62	81	870
870	870	870	870	870	870	870	870	870	870	870	870	870

More studies on striped magic square are available at author's site [2]

1.5 $(a+b)^2$—Type

In this case, we consider two small magic squares one as a and another as b, then put in between magic rectangles of orders $a \times b$ and $b \times a$. See below two examples of orders 10 and 12.

38	62	36	68	35	64	76	78	21	27	505
67	49	54	43	56	34	26	32	69	75	505
61	44	55	50	53	40	28	29	72	73	505
41	58	45	52	47	60	77	71	30	24	505
59	51	48	57	46	42	22	70	31	79	505
37	39	65	33	66	63	74	23	80	25	505
88	14	89	16	10	86	7	96	1	98	505
90	20	83	17	82	11	2	97	8	95	505
9	81	18	84	19	92	100	3	94	5	505
15	87	12	85	91	13	93	6	99	4	505
505	505	505	505	505	505	505	505	505	505	505

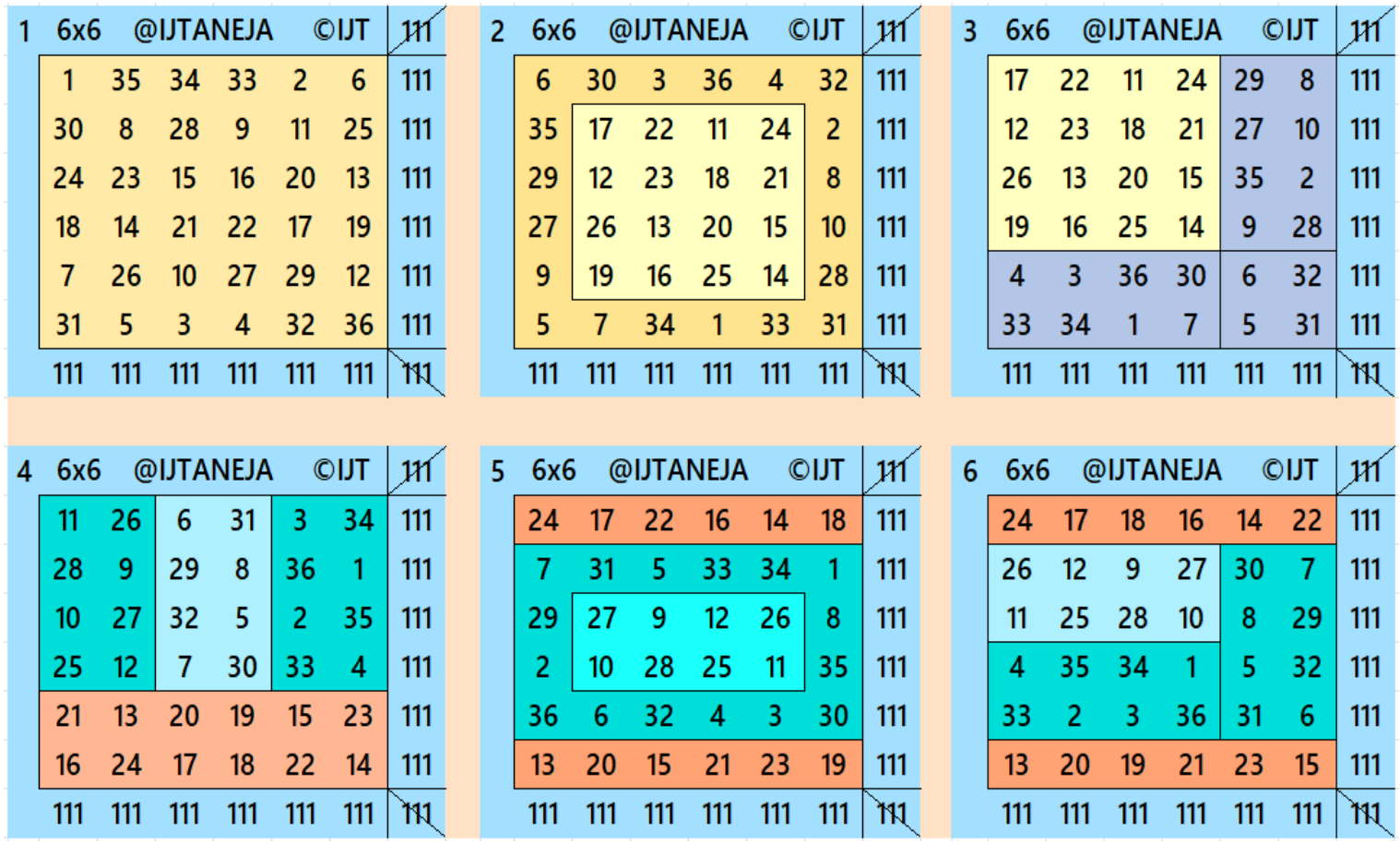
48	42	102	104	91	53	93	47	114	32	29	115	870
45	86	84	57	90	58	60	100	31	113	116	30	870
46	56	71	76	65	78	89	99	3	6	143	138	870
101	62	66	77	72	75	83	44	144	11	134	1	870
51	82	80	67	74	69	63	94	4	133	12	141	870
96	64	73	70	79	68	81	49	137	136	9	8	870
95	85	61	88	55	87	59	50	140	10	135	5	870
98	103	43	41	54	92	52	97	7	139	2	142	870
16	129	19	124	20	121	128	23	39	108	33	110	870
130	15	22	27	117	120	26	123	34	109	40	107	870
131	14	127	118	28	25	119	18	112	35	106	37	870
13	132	122	21	125	24	17	126	105	38	111	36	870
870	870	870	870	870	870	870	870	870	870	870	870	870

Based on above five ideas, below are magic squares of orders 6, 8, 10 and 12.

Different Types of Magic Squares of Orders 6, 8, 10 and 12, **Zenodo**, November 07, 2023, pp. 1-41, *https://doi.org/10.5281/zenodo.10080859*

2 Magic Squares of Order 6

Based on the idea of different types of **magic rectangles**, below are 6 different magic squares of order 6:



The first two are well known in the literature and the third is new. It is appearing for the first time.

3 Magic Squares of Order 8

Based on the idea of different types of **magic rectangles**, below are 30 different magic squares of order 8. These are with different properties. These includes **bordered, double digits, cornered, striped**, etc.

Different Types of Magic Squares of Orders 6, 8, 10 and 12, **Zenodo**, November 07, 2023, pp. 1-41, *https://doi.org/10.5281/zenodo.10080859*

pan	260	260	260	260	260	260	260	260
260	7	60	1	62	15	52	9	54
260	2	61	8	59	10	53	16	51
260	64	3	58	5	56	11	50	13
260	57	6	63	4	49	14	55	12
260	23	44	17	46	31	36	25	38
260	18	45	24	43	26	37	32	35
260	48	19	42	21	40	27	34	29
	41	22	47	20	33	30	39	28
1	260	260	260	260	260	260	260	260

2	8x8		@IJTANEJA			©IJT		260
	8	2	62	64	51	13	53	7
	5	46	44	17	50	18	20	60
	6	16	31	36	25	38	49	59
	11	22	26	37	32	35	43	54
	61	24	40	27	34	29	41	4
	56	42	33	30	39	28	23	9
	55	45	21	48	15	47	19	10
	58	63	3	1	14	52	12	57
	260	260	260	260	260	260	260	260

3	8x8		@IJTANEJA			©IJT		260
	12	54	55	9	8	58	59	5
	53	11	10	56	57	7	6	60
	1	63	62	4	13	51	50	16
	64	2	3	61	52	14	15	49
	25	39	38	28	24	42	43	21
	40	26	27	37	41	23	22	44
	20	46	47	17	29	35	34	32
	45	19	18	48	36	30	31	33
	260	260	260	260	260	260	260	260

4	8x8		@IJTANEJA			©IJT		260
	1	64	11	54	17	48	25	40
	3	62	55	10	45	20	39	26
	63	2	9	56	22	43	34	31
	61	4	16	49	44	21	37	28
	60	5	52	13	42	23	32	33
	58	7	14	51	24	41	30	35
	6	59	50	15	47	18	27	38
	8	57	53	12	19	46	36	29
	260	260	260	260	260	260	260	260

5	8x8		@IJTANEJA			©IJT		260
	12	54	55	9	8	57	13	52
	53	11	10	56	58	7	51	14
	1	63	62	4	59	6	50	15
	64	2	3	61	5	60	16	49
	25	40	20	45	24	42	43	21
	39	26	46	19	41	23	22	44
	38	27	47	18	29	35	34	32
	28	37	17	48	36	30	31	33
	260	260	260	260	260	260	260	260

6	8x8		@IJTANEJA			©IJT		260
	19	16	52	45	48	15	39	26
	47	23	41	44	22	18	28	37
	14	42	24	21	43	51	38	27
	50	49	13	20	17	46	25	40
	34	31	3	64	4	60	57	7
	35	30	6	11	56	53	10	59
	29	36	63	54	9	12	55	2
	32	33	58	1	61	5	8	62
	260	260	260	260	260	260	260	260

Different Types of Magic Squares of Orders 6, 8, 10 and 12, **Zenodo**,
November 07, 2023, pp. 1-41, *https://doi.org/10.5281/zenodo.10080859*

7 8x8 @IJTANEJA ©IJT 260

3	1	63	61	60	58	8	6	260
62	64	2	4	5	7	57	59	260
17	48	31	36	25	38	21	44	260
20	45	26	37	32	35	24	41	260
47	18	40	27	34	29	43	22	260
46	19	33	30	39	28	42	23	260
53	55	9	11	16	14	50	52	260
12	10	56	54	49	51	15	13	260
260	260	260	260	260	260	260	260	260

8 8x8 @IJTANEJA ©IJT 260

8	1	63	61	60	58	6	3	260
57	64	2	4	5	7	59	62	260
17	48	25	40	29	36	21	44	260
20	45	39	26	35	30	24	41	260
47	18	38	27	34	31	43	22	260
46	19	28	37	32	33	42	23	260
9	16	11	52	53	14	55	50	260
56	49	54	13	12	51	10	15	260
260	260	260	260	260	260	260	260	260

9 8x8 @IJTANEJA ©IJT 260

8	57	17	20	47	46	9	56	260
1	64	48	45	18	19	16	49	260
63	2	25	40	29	36	11	54	260
61	4	39	26	35	30	52	13	260
60	5	38	27	34	31	53	12	260
58	7	28	37	32	33	14	51	260
6	59	21	24	43	42	55	10	260
3	62	44	41	22	23	50	15	260
260	260	260	260	260	260	260	260	260

10 8x8 @IJTANEJA ©IJT 260

12	57	56	4	2	64	46	19	260
53	8	9	61	63	1	59	6	260
14	51	39	25	38	28	47	18	260
50	15	26	40	27	37	5	60	260
48	17	34	32	29	35	16	49	260
62	3	31	33	36	30	22	43	260
11	54	45	52	24	23	44	7	260
10	55	20	13	41	42	21	58	260
260	260	260	260	260	260	260	260	260

11 8x8 @IJTANEJA ©IJT 260

34	32	27	37	36	30	25	39	260
63	53	54	7	10	60	9	4	260
1	19	13	17	47	49	50	64	260
8	45	22	41	44	23	20	57	260
3	51	43	24	21	42	14	62	260
59	15	52	48	18	16	46	6	260
61	12	11	58	55	5	56	2	260
31	33	38	28	29	35	40	26	260
260	260	260	260	260	260	260	260	260

12 8x8 @IJTANEJA ©IJT 260

36	32	27	37	34	30	25	39	260
8	59	47	12	50	19	45	20	260
57	6	18	53	15	46	16	49	260
10	55	43	24	42	21	9	56	260
17	48	22	41	23	44	60	5	260
52	13	4	64	3	63	54	7	260
51	14	61	1	62	2	11	58	260
29	33	38	28	31	35	40	26	260
260	260	260	260	260	260	260	260	260

Different Types of Magic Squares of Orders 6, 8, 10 and 12, **Zenodo**,
November 07, 2023, pp. 1-41, *https://doi.org/10.5281/zenodo.10080859*

13 8x8 @IJTANEJA ©IJT 260

59	8	47	12	50	19	45	20	260
6	57	18	53	15	46	9	56	260
10	55	43	24	42	21	16	49	260
17	48	22	41	23	44	60	5	260
52	13	3	64	7	63	54	4	260
51	14	62	1	58	2	11	61	260
36	32	27	37	34	30	25	39	260
29	33	38	28	31	35	40	26	260
260	260	260	260	260	260	260	260	260

14 8x8 @IJTANEJA ©IJT 260

36	32	27	39	34	30	25	37	260
23	22	44	41	17	48	12	53	260
42	43	21	24	46	19	55	10	260
13	51	50	16	47	18	54	11	260
52	14	15	49	20	45	9	56	260
63	1	3	61	60	58	6	8	260
2	64	62	4	5	7	59	57	260
29	33	38	26	31	35	40	28	260
260	260	260	260	260	260	260	260	260

15 8x8 @IJTANEJA ©IJT 260

22	44	23	41	20	45	12	53	260
43	21	42	24	46	19	54	11	260
13	51	50	16	47	18	55	10	260
52	14	15	49	17	48	9	56	260
3	1	63	61	60	58	6	8	260
62	64	2	4	5	7	59	57	260
37	27	32	36	34	30	25	39	260
28	38	33	29	31	35	40	26	260
260	260	260	260	260	260	260	260	260

16 8x8 @IJTANEJA ©IJT 260

22	43	13	52	20	45	12	53	260
44	21	51	14	46	19	54	11	260
23	42	50	15	47	18	55	10	260
41	24	16	49	17	48	9	56	260
3	1	63	61	60	58	6	8	260
62	64	2	4	5	7	59	57	260
37	27	32	36	34	30	25	39	260
28	38	33	29	31	35	40	26	260
260	260	260	260	260	260	260	260	260

17 8x8 @IJTANEJA ©IJT 260

30	34	27	37	36	32	25	39	260
63	53	54	7	9	60	10	4	260
1	24	43	42	21	20	45	64	260
8	41	22	23	44	47	18	57	260
3	50	16	51	13	46	19	62	260
59	15	49	14	52	17	48	6	260
61	12	11	58	56	5	55	2	260
35	31	38	28	29	33	40	26	260
260	260	260	260	260	260	260	260	260

18 8x8 @IJTANEJA ©IJT 260

31	36	25	38	43	22	13	52	260
26	37	32	35	23	42	1	64	260
40	27	34	29	41	24	54	11	260
33	30	39	28	49	16	9	56	260
18	17	44	50	20	46	7	58	260
47	48	21	15	19	45	53	12	260
10	8	62	51	6	61	60	2	260
55	57	3	14	59	4	63	5	260
260	260	260	260	260	260	260	260	260

19	8x8		@IJTANEJA				©IJT	260
15	49	48	47	16	20	9	56	260
44	22	42	23	25	39	13	52	260
38	37	29	30	34	27	54	11	260
32	28	35	36	31	33	1	64	260
21	40	24	41	43	26	7	58	260
45	19	17	18	46	50	53	12	260
51	61	62	8	6	10	60	2	260
14	4	3	57	59	55	63	5	260
260	260	260	260	260	260	260	260	260

20	8x8		@IJTANEJA				©IJT	260
20	44	18	50	17	46	9	56	260
49	31	36	25	38	16	13	52	260
43	26	37	32	35	22	54	11	260
41	40	27	34	29	24	1	64	260
23	33	30	39	28	42	7	58	260
19	21	47	15	48	45	53	12	260
62	51	61	8	6	10	60	2	260
3	14	4	57	59	55	63	5	260
260	260	260	260	260	260	260	260	260

21	8x8		@IJTANEJA				©IJT	260
25	42	24	39	47	18	53	12	260
40	23	41	26	50	15	9	56	260
20	43	46	21	16	49	1	64	260
45	22	19	44	17	48	54	11	260
33	34	35	27	29	37	7	58	260
32	31	30	38	36	28	13	52	260
10	61	62	8	6	51	60	2	260
55	4	3	57	59	14	63	5	260
260	260	260	260	260	260	260	260	260

22	8x8		@IJTANEJA				©IJT	260
25	40	20	45	47	18	53	12	260
42	23	43	22	50	15	9	56	260
24	41	46	19	16	49	1	64	260
39	26	21	44	17	48	54	11	260
33	34	35	27	29	37	7	58	260
32	31	30	38	36	28	13	52	260
10	61	62	8	6	51	60	2	260
55	4	3	57	59	14	63	5	260
260	260	260	260	260	260	260	260	260

23	8x8		@IJTANEJA				©IJT	260
38	31	36	30	28	32	13	52	260
21	45	19	47	48	15	53	12	260
43	41	23	26	40	22	54	11	260
16	24	42	39	25	49	1	64	260
50	20	46	18	17	44	9	56	260
27	34	29	35	37	33	7	58	260
10	6	62	8	51	61	60	2	260
55	59	3	57	14	4	63	5	260
260	260	260	260	260	260	260	260	260

24	8x8		@IJTANEJA				©IJT	260
31	38	36	30	28	32	13	52	260
40	26	23	41	44	21	1	64	260
25	39	42	24	19	46	9	56	260
15	49	48	18	22	43	54	11	260
50	16	17	47	45	20	53	12	260
34	27	29	35	37	33	7	58	260
10	8	62	6	51	61	60	2	260
55	57	3	59	14	4	63	5	260
260	260	260	260	260	260	260	260	260

25 8x8 @IJTANEJA ©IJT 260

32	31	36	30	28	38	13	52	260
40	25	15	50	44	21	1	64	260
26	39	49	16	19	46	9	56	260
23	42	48	17	22	43	54	11	260
41	24	18	47	45	20	53	12	260
33	34	29	35	37	27	7	58	260
10	8	62	6	51	61	60	2	260
55	57	3	59	14	4	63	5	260
260	260	260	260	260	260	260	260	260

26 8x8 @IJTANEJA ©IJT 260

8	2	62	64	51	13	53	7	260
5	25	42	24	39	17	48	60	260
6	40	23	41	26	50	15	59	260
11	20	43	46	21	16	49	54	260
61	45	22	19	44	47	18	4	260
56	35	27	34	33	29	37	9	260
55	30	38	31	32	36	28	10	260
58	63	3	1	14	52	12	57	260
260	260	260	260	260	260	260	260	260

27 8x8 @IJTANEJA ©IJT 260

8	2	62	64	51	13	53	7	260
5	25	40	20	45	17	48	60	260
6	42	23	43	22	50	15	59	260
11	24	41	46	19	16	49	54	260
61	39	26	21	44	47	18	4	260
56	35	27	34	33	29	37	9	260
55	30	38	31	32	36	28	10	260
58	63	3	1	14	52	12	57	260
260	260	260	260	260	260	260	260	260

28 8x8 @IJTANEJA ©IJT 260

8	2	62	64	51	13	53	7	260
5	38	31	36	30	28	32	60	260
6	21	45	19	47	48	15	59	260
11	43	41	23	26	40	22	54	260
61	16	24	42	39	25	49	4	260
56	50	20	46	18	17	44	9	260
55	27	34	29	35	37	33	10	260
58	63	3	1	14	52	12	57	260
260	260	260	260	260	260	260	260	260

29 8x8 @IJTANEJA ©IJT 260

8	2	62	64	51	13	53	7	260
5	38	31	32	30	28	36	60	260
6	40	26	23	41	44	21	59	260
11	25	39	42	24	22	43	54	260
61	18	49	48	15	19	46	4	260
56	47	16	17	50	45	20	9	260
55	27	34	33	35	37	29	10	260
58	63	3	1	14	52	12	57	260
260	260	260	260	260	260	260	260	260

30 8x8 @IJTANEJA ©IJT 260

8	2	62	64	51	13	53	7	260
5	31	36	25	38	43	22	60	260
6	26	37	32	35	41	24	59	260
11	40	27	34	29	49	16	54	260
61	33	30	39	28	23	42	4	260
56	18	17	50	44	20	46	9	260
55	47	48	15	21	19	45	10	260
58	63	3	1	14	52	12	57	260
260	260	260	260	260	260	260	260	260

4 Magic Squares of Order 10

Based on the idea of different types of **magic rectangles**, below are few different magic squares of order 10. These are with different properties. includes **bordered,** $(a+b)^2-$**type, double digits, cornered, striped**, etc. Total there are 175 magic squares of order 10. The rest can be seen in author's site [3] along with **pdf file** for download.

Different Types of Magic Squares of Orders 6, 8, 10 and 12, **Zenodo**,
November 07, 2023, pp. 1-41, *https://doi.org/10.5281/zenodo.10080859*

1 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

1	99	46	62	18	74	55	87	30	33	505
76	12	98	43	60	39	81	4	65	27	505
42	68	23	90	36	17	79	51	94	5	505
70	7	75	34	21	83	48	92	16	59	505
54	31	69	77	45	22	96	20	3	88	505
85	44	11	29	97	56	10	63	38	72	505
28	53	40	6	82	95	67	49	71	14	505
37	25	84	91	9	50	13	78	52	66	505
93	80	57	15	64	8	32	26	89	41	505
19	86	2	58	73	61	24	35	47	100	505
505	505	505	505	505	505	505	505	505	505	505

2 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

94	1	11	96	30	77	21	70	72	33	505
12	16	85	89	76	63	39	59	41	25	505
91	20	81	10	22	36	52	49	65	79	505
95	13	88	6	34	44	51	50	57	67	505
93	87	14	8	69	40	53	48	61	32	505
4	83	18	97	28	37	45	56	64	73	505
9	86	15	92	26	66	47	54	35	75	505
99	17	84	2	74	58	55	46	43	27	505
3	82	19	98	78	60	62	42	38	23	505
5	100	90	7	68	24	80	31	29	71	505
505	505	505	505	505	505	505	505	505	505	505

3 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

94	1	11	96	68	33	69	23	72	38	505
12	16	85	89	40	61	32	78	29	63	505
91	20	81	10	30	71	46	55	25	76	505
95	13	88	6	44	57	54	47	58	43	505
93	86	15	8	80	21	50	51	59	42	505
4	83	18	97	34	67	48	53	74	27	505
3	82	19	98	73	28	56	45	60	41	505
99	17	84	2	35	66	49	52	36	65	505
9	87	14	92	77	62	37	26	22	79	505
5	100	90	7	24	39	64	75	70	31	505
505	505	505	505	505	505	505	505	505	505	505

6 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

13	88	93	8	31	77	28	68	32	67	505
85	16	95	6	24	70	73	33	69	34	505
15	86	7	94	74	27	42	64	35	61	505
87	14	5	96	22	79	37	59	66	40	505
84	17	90	11	76	25	43	58	49	52	505
18	83	10	91	23	78	62	39	54	47	505
82	19	92	9	80	21	57	44	56	45	505
20	81	12	89	71	30	38	63	50	51	505
1	99	98	4	75	26	60	41	46	55	505
100	2	3	97	29	72	65	36	48	53	505
505	505	505	505	505	505	505	505	505	505	505

7 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

41	60	33	68	21	80	93	8	13	88	505
58	43	67	34	79	22	92	9	87	14	505
59	42	36	65	23	78	7	94	15	86	505
44	57	66	35	76	25	12	89	85	16	505
37	63	62	40	77	24	90	11	84	17	505
64	38	39	61	26	75	10	91	18	83	505
29	71	70	32	74	27	95	6	82	19	505
72	30	31	69	28	73	5	96	20	81	505
45	55	47	53	52	51	1	99	4	98	505
56	46	54	48	49	50	100	2	97	3	505
505	505	505	505	505	505	505	505	505	505	505

9 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

48	59	43	57	45	55	54	41	52	51	505
14	8	9	90	6	85	96	91	94	12	505
97	28	84	79	23	77	20	18	75	4	505
86	74	71	29	68	35	31	69	27	15	505
2	80	34	38	64	39	61	67	21	99	505
13	76	65	63	37	62	40	36	25	88	505
100	19	32	72	33	66	70	30	82	1	505
3	26	17	22	78	24	81	83	73	98	505
89	93	92	11	95	16	5	10	7	87	505
53	42	58	44	56	46	47	60	49	50	505
505	505	505	505	505	505	505	505	505	505	505

10 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

48	59	43	57	45	55	54	41	51	52	505
80	81	24	86	95	8	3	27	25	76	505
21	20	77	15	6	93	98	74	83	18	505
14	87	37	63	62	40	33	68	92	9	505
94	7	64	38	39	61	67	34	75	26	505
12	89	29	71	70	32	66	35	17	84	505
4	97	72	30	31	69	36	65	11	90	505
100	1	85	88	28	91	5	2	23	82	505
79	22	16	13	73	10	96	99	78	19	505
53	42	58	44	56	46	47	60	50	49	505
505	505	505	505	505	505	505	505	505	505	505

11 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

48	59	43	57	45	55	54	41	52	51	505
62	40	37	63	33	68	75	26	86	15	505
39	61	64	38	67	34	28	73	9	92	505
29	71	32	70	66	35	74	27	11	90	505
72	30	69	31	36	65	25	76	89	12	505
17	22	19	81	78	80	83	24	88	13	505
84	79	82	20	23	21	18	77	14	87	505
1	99	3	97	96	6	94	8	16	85	505
100	2	98	4	5	95	7	93	91	10	505
53	42	58	44	56	46	47	60	49	50	505
505	505	505	505	505	505	505	505	505	505	505

13 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

80	81	24	86	95	8	3	27	25	76	505
21	20	77	15	6	93	98	74	11	90	505
14	87	37	63	62	40	33	68	92	9	505
94	7	64	38	39	61	66	35	75	26	505
12	89	29	71	70	32	67	34	17	84	505
4	97	72	30	31	69	36	65	83	18	505
100	1	85	88	28	91	5	2	23	82	505
79	22	16	13	73	10	96	99	78	19	505
43	59	48	51	45	57	54	52	41	55	505
58	42	53	50	56	44	47	49	60	46	505
505	505	505	505	505	505	505	505	505	505	505

16 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

48	59	43	57	45	55	54	41	52	51	505
7	98	92	6	97	8	10	2	89	96	505
100	83	20	13	87	17	86	16	82	1	505
90	18	81	88	14	84	15	85	19	11	505
5	3	9	95	4	93	91	99	12	94	505
27	69	72	26	28	77	30	22	78	76	505
80	63	40	67	36	33	62	66	37	21	505
70	38	61	34	65	68	39	35	64	31	505
25	32	29	75	73	24	71	79	23	74	505
53	42	58	44	56	46	47	60	49	50	505
505	505	505	505	505	505	505	505	505	505	505

17 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

57	59	43	48	51	55	54	41	52	45	505
15	84	13	85	87	20	82	18	1	100	505
86	17	88	16	14	81	19	83	99	2	505
5	95	7	93	92	12	90	10	98	3	505
96	6	94	8	9	89	11	91	4	97	505
21	80	73	32	27	25	75	30	70	72	505
24	77	28	69	74	76	26	71	31	29	505
78	23	35	62	38	65	64	33	67	40	505
79	22	66	39	63	36	37	68	34	61	505
44	42	58	53	50	46	47	60	49	56	505
505	505	505	505	505	505	505	505	505	505	505

19 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

89	12	1	99	6	97	96	3	94	8	505
11	90	100	2	95	4	5	98	7	93	505
91	10	17	81	22	83	24	80	78	19	505
9	92	84	20	79	18	77	21	23	82	505
88	13	27	75	25	30	72	32	70	73	505
14	87	74	26	76	71	29	69	31	28	505
86	15	33	40	67	65	62	64	38	35	505
16	85	68	61	34	36	39	37	63	66	505
41	59	43	57	48	55	54	51	45	52	505
60	42	58	44	53	46	47	50	56	49	505
505	505	505	505	505	505	505	505	505	505	505

23 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

7	96	1	98	48	53	27	76	21	78	505
2	97	8	95	59	42	22	77	28	75	505
100	3	94	5	43	58	80	23	74	25	505
93	6	99	4	57	44	73	26	79	24	505
88	90	9	15	51	50	66	31	72	33	505
14	20	81	87	55	46	34	40	61	67	505
89	17	84	12	54	47	69	37	64	32	505
16	83	18	85	41	60	36	63	38	65	505
10	82	19	91	52	49	30	62	39	71	505
86	11	92	13	45	56	68	70	29	35	505
505	505	505	505	505	505	505	505	505	505	505

26 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

4	98	1	99	48	53	21	79	78	24	505
97	3	100	2	59	42	80	22	23	77	505
94	8	95	5	43	58	25	75	74	28	505
7	93	6	96	51	50	76	26	27	73	505
13	87	86	16	57	44	33	67	66	36	505
88	14	15	85	41	60	68	34	35	65	505
17	83	82	20	54	47	32	70	29	71	505
84	18	19	81	55	46	69	31	72	30	505
9	91	90	12	52	49	62	40	63	37	505
92	10	11	89	45	56	39	61	38	64	505
505	505	505	505	505	505	505	505	505	505	505

33 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

43	58	38	63	35	66	78	23	71	30	505
60	41	61	40	68	33	24	77	29	72	505
42	59	64	37	34	67	79	22	70	31	505
57	44	39	62	65	36	21	80	32	69	505
53	45	52	51	47	55	25	75	74	28	505
48	56	49	50	54	46	76	26	27	73	505
1	100	7	5	12	10	95	93	92	90	505
99	2	94	96	89	91	6	8	9	11	505
4	97	13	87	82	85	84	15	18	20	505
98	3	88	14	19	16	17	86	83	81	505
505	505	505	505	505	505	505	505	505	505	505

34 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

33	67	66	65	34	38	76	78	21	27	505
62	40	60	41	43	57	26	32	69	75	505
56	55	47	48	52	45	28	29	72	73	505
50	46	53	54	49	51	77	71	30	24	505
39	58	42	59	61	44	22	70	31	79	505
63	37	35	36	64	68	74	23	80	25	505
88	14	89	16	10	86	7	96	1	98	505
90	20	83	17	82	11	2	97	8	95	505
9	81	18	84	19	92	100	3	94	5	505
15	87	12	85	91	13	93	6	99	4	505
505	505	505	505	505	505	505	505	505	505	505

47 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

38	62	35	68	36	64	29	72	24	77	505
67	49	54	43	56	34	71	30	21	80	505
61	44	55	50	53	40	32	69	78	23	505
59	58	45	52	47	42	70	31	79	22	505
41	51	48	57	46	60	25	75	74	28	505
37	39	66	33	65	63	76	26	27	73	505
90	91	9	12	13	88	99	2	5	96	505
11	10	92	89	87	14	98	3	8	93	505
82	20	83	17	86	15	1	100	94	7	505
19	81	18	84	16	85	4	97	95	6	505
505	505	505	505	505	505	505	505	505	505	505

54 10x10 Inder J. Taneja @IJTANEJA ©IJT 505

49	54	43	56	61	40	76	78	21	27	505
44	55	50	53	59	42	26	70	31	75	505
58	45	52	47	67	34	28	32	69	73	505
51	48	57	46	41	60	22	29	72	79	505
36	35	68	62	38	64	77	71	30	24	505
65	66	33	39	37	63	74	23	80	25	505
94	12	95	91	93	4	99	3	9	5	505
1	13	17	16	86	20	83	82	87	100	505
11	88	84	85	15	81	18	19	14	90	505
96	89	6	10	8	97	2	98	92	7	505
505	505	505	505	505	505	505	505	505	505	505

Different Types of Magic Squares of Orders 6, 8, 10 and 12, **Zenodo**,
November 07, 2023, pp. 1-41, *https://doi.org/10.5281/zenodo.10080859*

77	10x10	Inder J. Taneja		@IJTANEJA		©IJT				505
43	60	42	57	35	66	78	23	71	30	505
58	41	59	44	68	33	24	77	29	72	505
38	61	64	39	34	67	79	22	70	31	505
63	40	37	62	65	36	21	80	32	69	505
53	45	52	51	47	55	25	75	74	28	505
48	56	49	50	54	46	76	26	27	73	505
1	100	7	5	12	10	95	93	92	90	505
99	2	94	96	89	91	6	8	9	11	505
4	97	13	87	82	85	84	15	18	20	505
98	3	88	14	19	16	17	86	83	81	505
505	505	505	505	505	505	505	505	505	505	505

82	10x10	Inder J. Taneja		@IJTANEJA		©IJT				505
3	1	99	97	96	6	94	8	9	92	505
98	100	2	4	5	95	7	93	11	90	505
25	76	43	60	42	57	35	66	91	10	505
75	26	58	41	59	44	68	33	89	12	505
27	74	38	61	64	39	34	67	88	13	505
73	28	63	40	37	62	65	36	14	87	505
72	29	53	45	52	51	47	55	86	15	505
70	31	48	56	49	50	54	46	16	85	505
32	69	17	83	19	81	24	22	78	80	505
30	71	84	18	82	20	77	79	23	21	505
505	505	505	505	505	505	505	505	505	505	505

90	10x10	Inder J. Taneja		@IJTANEJA		©IJT				505
96	21	72	13	20	18	74	91	93	7	505
5	80	29	88	81	83	27	10	8	94	505
85	16	43	58	38	63	35	66	82	19	505
4	97	60	41	61	40	68	33	1	100	505
30	71	42	59	64	37	34	67	25	76	505
6	95	57	44	39	62	65	36	92	9	505
79	22	53	45	52	51	47	55	28	73	505
99	2	48	56	49	50	54	46	75	26	505
3	89	17	24	78	87	70	32	15	90	505
98	12	84	77	23	14	31	69	86	11	505
505	505	505	505	505	505	505	505	505	505	505

94	10x10	Inder J. Taneja		@IJTANEJA		©IJT				505
49	54	43	56	61	40	31	70	18	83	505
44	55	50	53	41	60	19	82	5	96	505
58	45	52	47	59	42	72	29	94	7	505
51	48	57	46	67	34	27	74	99	2	505
36	35	62	68	38	64	25	76	95	6	505
65	66	39	33	37	63	71	30	10	91	505
28	26	80	69	24	79	78	20	88	13	505
73	75	21	32	77	22	81	23	8	93	505
15	84	12	90	9	98	97	85	1	14	505
86	17	89	11	92	3	4	16	87	100	505
505	505	505	505	505	505	505	505	505	505	505

102	10x10	Inder J. Taneja		@IJTANEJA		©IJT				505
21	19	81	79	78	76	26	24	99	2	505
80	82	20	22	23	25	75	77	10	91	505
35	66	49	54	43	56	39	62	94	7	505
38	63	44	55	50	53	42	59	5	96	505
65	36	58	45	52	47	61	40	95	6	505
64	37	51	48	57	46	60	41	18	83	505
71	73	27	29	34	32	68	70	88	13	505
30	28	74	72	67	69	33	31	8	93	505
9	90	12	98	15	84	97	85	1	14	505
92	11	89	3	86	17	4	16	87	100	505
505	505	505	505	505	505	505	505	505	505	505

107	10x10	Inder J. Taneja		@IJTANEJA		©IJT				505
30	72	73	27	26	75	68	33	88	13	505
71	29	28	74	76	25	69	32	95	6	505
19	81	80	22	77	24	34	67	94	7	505
82	20	21	79	23	78	31	70	5	96	505
43	58	38	63	42	60	61	39	8	93	505
57	44	64	37	59	41	40	62	18	83	505
56	45	65	36	47	53	52	50	99	2	505
46	55	35	66	54	48	49	51	10	91	505
90	98	12	15	9	84	97	85	1	14	505
11	3	89	86	92	17	4	16	87	100	505
505	505	505	505	505	505	505	505	505	505	505

116	10x10	Inder J. Taneja		@IJTANEJA		©IJT				505
26	20	80	82	69	31	71	25	99	2	505
23	43	60	42	57	35	66	78	18	83	505
24	58	41	59	44	34	67	77	94	7	505
29	38	61	64	39	68	33	72	5	96	505
79	63	40	37	62	65	36	22	95	6	505
74	53	45	52	51	47	55	27	10	91	505
73	48	56	49	50	54	46	28	88	13	505
76	81	21	19	32	70	30	75	8	93	505
9	97	12	98	15	84	90	85	1	14	505
92	4	89	3	86	17	11	16	87	100	505
505	505	505	505	505	505	505	505	505	505	505

124	10x10	Inder J. Taneja		@IJTANEJA		©IJT				505
91	84	86	98	18	16	14	4	2	92	505
13	43	60	42	57	65	36	71	30	88	505
11	58	41	59	44	68	33	27	74	90	505
7	38	61	64	39	34	67	19	82	94	505
1	63	40	37	62	35	66	72	29	100	505
89	51	52	53	45	47	55	25	76	12	505
93	50	49	48	56	54	46	31	70	8	505
95	28	79	80	26	24	69	78	20	6	505
96	73	22	21	75	77	32	81	23	5	505
9	17	15	3	83	85	87	97	99	10	505
505	505	505	505	505	505	505	505	505	505	505

139	10x10	Inder J. Taneja		@IJTANEJA		©IJT				505
91	84	86	98	18	16	14	4	2	92	505
13	41	59	62	40	35	66	73	28	88	505
11	60	42	39	61	64	37	30	71	90	505
7	31	68	69	34	65	36	72	29	94	505
1	70	33	32	67	38	63	27	74	100	505
89	21	79	19	78	76	81	24	26	12	505
93	80	22	82	23	25	20	77	75	8	505
95	43	54	48	55	52	50	45	57	6	505
96	58	47	53	46	49	51	56	44	5	505
9	17	15	3	83	85	87	97	99	10	505
505	505	505	505	505	505	505	505	505	505	505

Above there are only few examples. As written above total there are 175 magic square of order 10. These are available at author's site [3].

5 Magic Squares of Order 12

Based on the idea of different types of **magic rectangles**, below are few different magic squares of order 12. These are of total 634 magic squares of order 12. These are given as **pdf file** in author's site [4]. These includes **bordered,** $(a+b)^2-$**type, double digits, cornered, striped**, etc. See below:

	pan	870	870	870	870	870	870	870	870	870	870	870	870
870	98	1	51	72	22	119	78	28	125	140	43	93	870
870	3	50	97	118	71	24	124	77	30	45	92	139	870
870	49	99	2	23	120	70	29	126	76	91	141	44	870
870	131	34	84	87	37	134	57	7	104	113	16	66	870
870	36	83	130	133	86	39	103	56	9	18	65	112	870
870	82	132	35	38	135	85	8	105	55	64	114	17	870
870	67	117	20	5	102	52	47	144	94	73	123	26	870
870	21	68	115	100	53	6	142	95	48	27	74	121	870
870	116	19	69	54	4	101	96	46	143	122	25	75	870
870	88	138	41	32	129	79	14	111	61	58	108	11	870
870	42	89	136	127	80	33	109	62	15	12	59	106	870
	137	40	90	81	31	128	63	13	110	107	10	60	870
1	870	870	870	870	870	870	870	870	870	870	870	870	870

	pan	870	870	870	870	870	870	870	870	870	870	870	870
870	7	140	1	142	15	132	9	134	23	124	17	126	870
870	2	141	8	139	10	133	16	131	18	125	24	123	870
870	144	3	138	5	136	11	130	13	128	19	122	21	870
870	137	6	143	4	129	14	135	12	121	22	127	20	870
870	31	116	25	118	39	108	33	110	47	100	41	102	870
870	26	117	32	115	34	109	40	107	42	101	48	99	870
870	120	27	114	29	112	35	106	37	104	43	98	45	870
870	113	30	119	28	105	38	111	36	97	46	103	44	870
870	55	92	49	94	63	84	57	86	71	76	65	78	870
870	50	93	56	91	58	85	64	83	66	77	72	75	870
870	96	51	90	53	88	59	82	61	80	67	74	69	870
	89	54	95	52	81	62	87	60	73	70	79	68	870
2	870	870	870	870	870	870	870	870	870	870	870	870	870

3	12x12 Inder J. Taneja https://numbers-magic.com/ ©IJT												870
	1	143	142	141	2	6	19	125	124	123	20	24	870
	138	8	136	9	11	133	120	26	118	27	29	115	870
	132	131	15	16	128	13	114	113	33	34	110	31	870
	18	14	129	130	17	127	36	32	111	112	35	109	870
	7	134	10	135	137	12	25	116	28	117	119	30	870
	139	5	3	4	140	144	121	23	21	22	122	126	870
	55	89	88	87	56	60	37	107	106	105	38	42	870
	84	62	82	63	65	79	102	44	100	45	47	97	870
	78	77	69	70	74	67	96	95	51	52	92	49	870
	72	68	75	76	71	73	54	50	93	94	53	91	870
	61	80	64	81	83	66	43	98	46	99	101	48	870
	85	59	57	58	86	90	103	41	39	40	104	108	870
	870	870	870	870	870	870	870	870	870	870	870	870	870

4	12x12 Inder J. Taneja https://numbers-magic.com/ ©IJT												870
	140	138	3	144	4	6	122	120	21	126	22	24	870
	2	17	130	11	132	143	20	35	112	29	114	125	870
	8	12	131	18	129	137	26	30	113	36	111	119	870
	10	134	13	128	15	135	28	116	31	110	33	117	870
	136	127	16	133	14	9	118	109	34	115	32	27	870
	139	7	142	1	141	5	121	25	124	19	123	23	870
	86	84	57	90	58	60	104	102	39	108	40	42	870
	56	71	76	65	78	89	38	53	94	47	96	107	870
	62	66	77	72	75	83	44	48	95	54	93	101	870
	64	80	67	74	69	81	46	98	49	92	51	99	870
	82	73	70	79	68	63	100	91	52	97	50	45	870
	85	61	88	55	87	59	103	43	106	37	105	41	870
	870	870	870	870	870	870	870	870	870	870	870	870	870

5 12x12 Inder J. Taneja https://numbers-magic.com/ ©IJT 870

17	130	11	132	137	8	119	26	35	112	29	114	870
12	131	18	129	135	10	125	20	30	113	36	111	870
134	13	128	15	143	2	117	28	116	31	110	33	870
127	16	133	14	9	136	27	118	109	34	115	32	870
4	3	144	138	6	140	24	122	120	126	22	21	870
141	142	1	7	5	139	23	121	25	19	123	124	870
57	58	90	84	60	86	42	104	102	108	39	40	870
88	87	55	61	59	85	41	103	43	37	106	105	870
71	76	65	78	63	82	45	100	53	94	47	96	870
66	77	72	75	81	64	107	38	48	95	54	93	870
80	67	74	69	89	56	99	46	98	49	92	51	870
73	70	79	68	83	62	101	44	91	52	97	50	870
870	870	870	870	870	870	870	870	870	870	870	870	870

8 12x12 Inder J. Taneja https://numbers-magic.com/ ©IJT 870

137	8	17	130	11	132	24	122	120	126	21	22	870
143	2	12	131	18	129	23	121	25	19	124	123	870
135	10	134	13	128	15	27	118	35	112	29	114	870
9	136	127	16	133	14	125	20	30	113	36	111	870
6	140	138	144	4	3	117	28	116	31	110	33	870
5	139	7	1	141	142	119	26	109	34	115	32	870
71	76	65	78	83	62	39	40	108	102	42	104	870
66	77	72	75	81	64	106	105	37	43	41	103	870
80	67	74	69	89	56	53	94	47	96	45	100	870
73	70	79	68	63	82	48	95	54	93	99	46	870
58	57	90	84	60	86	98	49	92	51	107	38	870
87	88	55	61	59	85	91	52	97	50	101	44	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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6	140	138	144	3	4	21	22	126	120	24	122	870
5	139	7	1	142	141	124	123	19	25	23	121	870
9	136	17	130	11	132	35	112	29	114	27	118	870
143	2	12	131	18	129	30	113	36	111	117	28	870
135	10	134	13	128	15	116	31	110	33	125	20	870
137	8	127	16	133	14	109	34	115	32	119	26	870
57	58	90	84	60	86	53	94	47	96	101	44	870
88	87	55	61	59	85	48	95	54	93	99	46	870
71	76	65	78	63	82	98	49	92	51	107	38	870
66	77	72	75	81	64	91	52	97	50	45	100	870
80	67	74	69	89	56	40	39	108	102	42	104	870
73	70	79	68	83	62	105	106	37	43	41	103	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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6	140	138	144	3	4	119	26	35	112	29	114	870
5	139	7	1	142	141	125	20	30	113	36	111	870
9	136	17	130	11	132	117	28	116	31	110	33	870
143	2	12	131	18	129	27	118	109	34	115	32	870
135	10	134	13	128	15	24	122	120	126	22	21	870
137	8	127	16	133	14	23	121	25	19	123	124	870
57	58	90	84	60	86	53	94	47	96	101	44	870
88	87	55	61	59	85	48	95	54	93	99	46	870
71	76	65	78	63	82	98	49	92	51	107	38	870
66	77	72	75	81	64	91	52	97	50	45	100	870
80	67	74	69	89	56	40	39	108	102	42	104	870
73	70	79	68	83	62	105	106	37	43	41	103	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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143	2	37	108	13	132	49	96	25	120	83	62	870
1	144	107	38	131	14	95	50	119	26	61	84	870
3	142	39	106	15	130	51	94	27	118	63	82	870
141	4	105	40	129	16	93	52	117	28	81	64	870
140	5	104	41	128	17	92	53	116	29	80	65	870
139	6	103	42	127	18	91	54	115	30	79	66	870
7	138	43	102	19	126	55	90	31	114	67	78	870
8	137	44	101	20	125	56	89	32	113	68	77	870
9	136	45	100	21	124	57	88	33	112	73	72	870
135	10	99	46	123	22	87	58	111	34	75	70	870
133	12	47	98	23	122	59	86	35	110	71	74	870
11	134	97	48	121	24	85	60	109	36	69	76	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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59	85	88	58	92	53	41	104	110	35	126	19	870
86	60	57	87	50	95	100	45	34	111	18	127	870
96	54	89	51	55	90	44	101	22	123	8	137	870
49	91	56	94	93	52	107	38	122	23	128	17	870
98	108	105	43	39	42	97	48	29	116	132	13	870
47	37	40	102	106	103	46	99	24	121	15	130	870
114	28	32	120	118	33	109	26	115	30	139	6	870
31	117	113	25	27	112	36	119	124	21	10	135	870
133	140	1	142	2	4	136	16	20	131	11	134	870
12	5	144	3	143	141	9	129	125	14	138	7	870
79	82	74	61	65	72	78	68	69	75	83	64	870
66	63	71	84	80	73	67	77	76	70	62	81	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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61	72	83	64	65	82	78	68	69	75	74	79	870
18	110	21	136	115	19	139	134	5	28	34	111	870
127	35	124	9	30	126	6	11	140	117	142	3	870
17	128	41	107	50	97	103	37	96	49	1	144	870
14	131	104	38	95	48	42	108	39	106	25	120	870
12	133	51	94	87	60	57	86	53	92	116	29	870
113	32	45	100	58	85	88	59	102	43	135	10	870
114	31	93	52	55	89	54	98	99	40	112	33	870
26	119	101	44	90	56	91	47	46	105	15	130	870
141	4	109	16	123	125	27	24	23	8	138	132	870
143	2	36	129	22	20	118	121	122	137	7	13	870
84	73	62	81	80	63	67	77	76	70	71	66	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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61	72	83	64	65	82	78	68	69	75	74	79	870
59	85	88	58	92	53	41	104	110	35	126	19	870
86	60	57	87	50	95	100	45	34	111	18	127	870
96	89	54	51	55	90	44	101	22	123	8	137	870
49	56	91	94	93	52	46	99	122	23	128	17	870
98	108	105	39	43	42	97	48	29	116	132	13	870
47	37	40	106	102	103	107	38	24	121	15	130	870
114	28	33	120	118	32	109	26	115	30	139	6	870
31	117	112	25	27	113	36	119	124	21	10	135	870
133	140	1	142	2	4	136	16	131	20	11	134	870
12	5	144	3	143	141	9	129	14	125	138	7	870
84	73	62	81	80	63	67	77	76	70	71	66	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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8	19	130	127	139	12	9	136	55	91	50	94	870
137	126	15	18	6	133	16	129	89	88	57	56	870
10	135	123	24	122	21	125	20	96	59	86	49	870
17	128	22	121	23	124	140	5	52	85	60	93	870
132	13	3	7	4	143	134	144	92	58	87	53	870
131	14	142	138	141	2	11	1	51	54	95	90	870
78	66	83	63	103	106	36	115	32	43	33	112	870
81	71	74	64	42	39	109	30	113	102	40	105	870
61	73	72	84	34	111	98	45	99	48	101	44	870
68	76	69	77	41	104	47	100	46	97	116	29	870
65	70	75	80	108	37	27	120	28	119	110	31	870
82	79	62	67	107	38	118	25	117	26	35	114	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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12	141	2	139	1	135	142	8	49	96	57	88	870
138	127	18	21	123	122	24	7	95	50	87	58	870
5	20	125	124	22	23	121	140	94	51	86	59	870
134	126	19	13	131	130	16	11	52	93	60	85	870
9	17	128	132	14	15	129	136	53	91	90	56	870
137	4	143	6	144	10	3	133	92	54	55	89	870
65	79	78	68	109	27	119	30	120	28	34	113	870
80	66	67	77	116	37	107	106	40	41	104	29	870
69	76	61	84	35	108	38	39	105	103	42	110	870
75	70	83	62	31	45	99	98	48	102	43	114	870
74	71	82	63	112	100	46	47	97	44	101	33	870
72	73	64	81	32	118	26	115	25	117	111	36	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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31	115	28	119	113	29	53	92	40	104	83	63	870
118	111	36	110	33	27	106	39	105	41	62	82	870
25	34	109	35	112	120	56	89	76	69	48	97	870
116	30	117	26	32	114	44	101	68	77	43	102	870
8	137	10	17	132	131	87	58	70	75	99	46	870
130	15	135	128	13	14	94	51	78	67	57	88	870
12	133	122	23	4	141	52	93	65	80	55	90	870
127	18	24	121	134	11	49	96	79	66	95	50	870
139	6	123	22	3	142	98	47	73	72	45	100	870
19	126	21	124	143	2	86	59	71	74	108	37	870
16	9	125	140	144	1	85	103	64	38	91	54	870
129	136	20	5	7	138	60	42	81	107	84	61	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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29	116	21	124	8	137	51	97	49	98	40	100	870
115	30	123	22	143	2	39	87	63	57	83	106	870
31	114	118	27	3	142	37	59	67	78	86	108	870
113	32	28	117	141	4	107	90	66	79	55	38	870
112	33	120	25	135	10	42	56	74	71	89	103	870
34	111	26	119	139	6	50	91	75	70	54	95	870
110	35	121	24	11	134	93	81	80	65	64	52	870
36	109	23	122	1	144	101	53	72	73	92	44	870
17	127	126	20	9	136	99	61	69	76	84	46	870
128	18	19	125	140	5	102	85	77	68	60	43	870
13	131	130	16	7	138	104	62	82	88	58	41	870
132	14	15	129	133	12	45	48	96	47	105	94	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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29	116	21	124	8	137	53	92	63	104	83	40	870
115	30	123	22	143	2	106	39	82	41	62	105	870
31	114	118	27	3	142	52	93	68	77	48	97	870
113	32	28	117	139	6	56	89	70	75	43	102	870
112	33	120	25	135	10	44	101	76	69	91	54	870
34	111	26	119	141	4	86	59	78	67	57	88	870
110	35	121	24	11	134	87	58	65	80	55	90	870
36	109	23	122	1	144	98	47	79	66	95	50	870
20	127	126	17	9	136	94	51	71	74	45	100	870
125	18	19	128	140	5	49	96	73	72	108	37	870
13	131	130	16	7	138	85	103	64	38	99	46	870
132	14	15	129	133	12	60	42	81	107	84	61	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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29	116	21	124	1	144	37	108	94	52	95	49	870
115	30	123	22	143	2	43	102	51	93	50	96	870
31	114	23	122	139	6	39	106	56	90	53	91	870
113	32	121	24	141	4	105	40	89	55	92	54	870
112	33	120	25	140	5	104	41	84	61	65	80	870
34	111	26	119	11	134	103	42	87	58	79	66	870
110	35	118	27	7	138	107	38	59	86	67	78	870
36	109	28	117	8	137	44	101	85	60	72	73	870
17	127	126	20	9	136	45	100	57	88	76	69	870
128	18	19	125	135	10	99	46	62	83	70	75	870
13	131	130	16	3	142	47	98	82	63	74	71	870
132	14	15	129	133	12	97	48	64	81	77	68	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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123	22	27	140	119	4	39	40	108	102	42	104	870
142	3	118	5	26	141	106	105	37	43	41	103	870
122	23	32	113	12	133	53	94	47	96	45	100	870
17	128	114	31	7	138	48	95	54	93	99	46	870
8	137	35	110	120	25	98	49	92	51	107	38	870
13	132	112	33	19	126	91	52	97	50	101	44	870
20	125	34	111	21	124	71	76	65	78	83	62	870
134	11	115	30	127	18	66	77	72	75	81	64	870
130	15	109	36	9	136	80	67	74	69	89	56	870
16	129	29	116	144	1	73	70	79	68	63	82	870
28	2	121	139	135	10	58	57	90	84	60	86	870
117	143	24	6	131	14	87	88	55	61	59	85	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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29	116	121	24	1	144	101	44	53	94	47	96	870
115	30	123	22	143	2	107	38	48	95	54	93	870
31	114	118	27	8	137	99	46	98	49	92	51	870
113	32	28	117	141	4	45	100	91	52	97	50	870
112	33	120	25	135	10	42	104	102	108	40	39	870
34	111	26	119	139	6	41	103	43	37	105	106	870
110	35	23	122	11	134	60	86	84	90	57	58	870
36	109	21	124	3	142	59	85	61	55	88	87	870
126	20	127	17	9	136	63	82	71	76	65	78	870
19	125	18	128	140	5	89	56	66	77	72	75	870
13	131	130	16	7	138	81	64	80	67	74	69	870
132	14	15	129	133	12	83	62	73	70	79	68	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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52	94	95	49	48	98	99	45	29	32	115	114	870
93	51	50	96	97	47	46	100	116	113	30	31	870
67	77	80	66	53	91	90	56	138	8	5	139	870
78	68	65	79	92	54	55	89	7	137	140	6	870
41	103	102	44	83	61	64	82	1	144	9	136	870
104	42	43	101	62	84	81	63	143	2	135	10	870
60	86	87	57	71	73	76	70	142	3	134	11	870
85	59	58	88	74	72	69	75	4	141	12	133	870
131	14	24	121	17	127	126	20	39	108	33	110	870
13	132	21	124	128	18	19	125	34	109	40	107	870
16	129	123	22	25	119	118	28	112	35	106	37	870
130	15	122	23	120	26	27	117	105	38	111	36	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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43	41	103	101	100	98	48	46	115	114	29	32	870
102	104	42	44	45	47	97	99	30	31	116	113	870
57	88	71	76	65	78	61	84	138	8	5	139	870
60	85	66	77	72	75	64	81	7	137	140	6	870
87	58	80	67	74	69	82	63	1	143	142	4	870
86	59	73	70	79	68	83	62	144	2	3	141	870
93	95	49	54	51	56	90	92	9	135	134	12	870
52	50	96	91	94	89	55	53	136	10	11	133	870
16	129	21	124	17	128	25	120	110	35	37	108	870
130	15	24	121	127	18	119	26	111	34	40	105	870
13	132	123	22	126	19	118	27	33	112	107	38	870
131	14	122	23	20	125	28	117	36	109	106	39	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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62	83	53	92	60	85	52	93	115	114	29	32	870
84	61	91	54	86	59	94	51	30	31	116	113	870
63	82	90	55	87	58	95	50	138	8	5	139	870
81	64	56	89	57	88	49	96	7	137	140	6	870
43	41	103	101	100	98	46	48	1	143	142	4	870
102	104	42	44	45	47	99	97	144	2	3	141	870
77	67	72	76	70	74	65	79	9	135	134	12	870
68	78	73	69	75	71	80	66	136	10	11	133	870
16	129	21	124	17	128	25	120	110	35	37	108	870
130	15	24	121	127	18	119	26	111	34	40	105	870
13	132	123	22	126	19	118	27	33	112	107	38	870
131	14	122	23	20	125	28	117	36	109	106	39	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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4	1	143	142	5	139	138	8	9	12	134	135	870
141	144	2	3	140	6	7	137	136	133	11	10	870
37	108	41	104	51	94	57	88	65	80	13	132	870
107	38	43	102	95	50	85	60	79	66	131	14	870
106	39	103	42	49	96	62	83	74	71	130	15	870
40	105	101	44	56	89	84	61	77	68	16	129	870
33	112	100	45	92	53	82	63	72	73	17	128	870
111	34	98	47	54	91	64	81	70	75	127	18	870
110	35	46	99	90	55	87	58	67	78	126	19	870
36	109	48	97	93	52	59	86	76	69	20	125	870
115	114	32	29	25	119	118	28	122	123	21	24	870
30	31	113	116	120	26	27	117	23	22	124	121	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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52	94	95	49	48	98	99	45	29	32	115	114	870
93	51	50	96	97	47	46	100	116	113	30	31	870
67	77	80	66	53	91	90	56	138	8	5	139	870
78	68	65	79	92	54	55	89	7	137	140	6	870
41	103	102	44	83	61	64	82	1	144	9	136	870
104	42	43	101	62	84	81	63	143	2	135	10	870
60	86	87	57	71	73	76	70	142	3	134	11	870
85	59	58	88	74	72	69	75	4	141	12	133	870
131	14	24	121	17	127	126	20	39	108	33	110	870
13	132	21	124	128	18	19	125	34	109	40	107	870
16	129	123	22	25	119	118	28	112	35	106	37	870
130	15	122	23	120	26	27	117	105	38	111	36	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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43	41	103	101	100	98	48	46	115	114	29	32	870
102	104	42	44	45	47	97	99	30	31	116	113	870
57	88	71	76	65	78	61	84	138	8	5	139	870
60	85	66	77	72	75	64	81	7	137	140	6	870
87	58	80	67	74	69	82	63	1	143	142	4	870
86	59	73	70	79	68	83	62	144	2	3	141	870
93	95	49	54	51	56	90	92	9	135	134	12	870
52	50	96	91	94	89	55	53	136	10	11	133	870
16	129	21	124	17	128	25	120	110	35	37	108	870
130	15	24	121	127	18	119	26	111	34	40	105	870
13	132	123	22	126	19	118	27	33	112	107	38	870
131	14	122	23	20	125	28	117	36	109	106	39	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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62	83	53	92	60	85	52	93	115	114	29	32	870
84	61	91	54	86	59	94	51	30	31	116	113	870
63	82	90	55	87	58	95	50	138	8	5	139	870
81	64	56	89	57	88	49	96	7	137	140	6	870
43	41	103	101	100	98	46	48	1	143	142	4	870
102	104	42	44	45	47	99	97	144	2	3	141	870
77	67	72	76	70	74	65	79	9	135	134	12	870
68	78	73	69	75	71	80	66	136	10	11	133	870
16	129	21	124	17	128	25	120	110	35	37	108	870
130	15	24	121	127	18	119	26	111	34	40	105	870
13	132	123	22	126	19	118	27	33	112	107	38	870
131	14	122	23	20	125	28	117	36	109	106	39	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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4	1	143	142	5	139	138	8	9	12	134	135	870
141	144	2	3	140	6	7	137	136	133	11	10	870
37	108	41	104	51	94	57	88	65	80	13	132	870
107	38	43	102	95	50	85	60	79	66	131	14	870
106	39	103	42	49	96	62	83	74	71	130	15	870
40	105	101	44	56	89	84	61	77	68	16	129	870
33	112	100	45	92	53	82	63	72	73	17	128	870
111	34	98	47	54	91	64	81	70	75	127	18	870
110	35	46	99	90	55	87	58	67	78	126	19	870
36	109	48	97	93	52	59	86	76	69	20	125	870
115	114	32	29	25	119	118	28	122	123	21	24	870
30	31	113	116	120	26	27	117	23	22	124	121	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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35	110	115	30	90	55	91	45	60	94	21	124	870
40	105	117	28	62	83	54	100	85	51	126	19	870
107	38	27	118	52	93	76	69	96	49	9	136	870
109	36	29	116	66	79	70	75	80	65	141	4	870
106	39	112	33	102	43	71	74	81	64	123	22	870
42	103	32	113	56	89	68	77	44	101	140	5	870
104	41	114	31	95	50	78	67	82	63	18	127	870
37	108	34	111	57	88	72	73	58	87	135	10	870
23	121	26	120	99	84	59	48	47	98	134	11	870
122	24	119	25	46	61	86	97	92	53	14	131	870
143	1	128	137	133	16	130	7	20	13	3	139	870
2	144	17	8	12	129	15	138	125	132	6	142	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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35	110	115	30	53	99	50	90	54	89	21	124	870
107	38	117	28	46	92	95	55	91	56	126	19	870
37	108	29	116	96	49	64	86	57	83	134	11	870
109	36	27	118	44	101	59	81	88	62	141	4	870
106	39	112	33	98	47	65	80	71	74	123	22	870
40	105	32	113	45	100	84	61	76	69	140	5	870
104	41	114	31	102	43	79	66	78	67	18	127	870
42	103	34	111	93	52	60	85	72	73	135	10	870
23	26	120	121	97	48	82	63	68	77	9	136	870
122	119	25	24	51	94	87	58	70	75	14	131	870
143	1	128	137	133	16	130	7	20	13	3	139	870
2	144	17	8	12	129	15	138	125	132	6	142	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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71	76	65	78	83	62	43	102	51	94	140	5	870
66	77	72	75	81	64	101	44	93	52	21	124	870
80	67	74	69	89	56	100	45	92	53	9	136	870
73	70	79	68	63	82	46	99	54	91	141	4	870
58	57	90	84	60	86	47	50	96	97	126	19	870
87	88	55	61	59	85	98	95	49	48	134	11	870
31	113	112	34	35	110	29	118	23	120	123	22	870
114	32	33	111	109	36	24	119	30	117	135	10	870
39	105	104	42	108	37	122	25	116	27	18	127	870
106	40	41	103	38	107	115	28	121	26	14	131	870
1	143	128	137	133	16	130	7	20	13	3	139	870
144	2	17	8	12	129	15	138	125	132	6	142	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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72	80	65	58	87	73	43	102	92	53	134	11	870
71	66	79	89	56	74	101	44	93	52	18	127	870
78	63	82	88	57	67	100	45	54	91	9	136	870
70	81	64	55	90	75	46	99	51	94	141	4	870
76	84	62	59	85	69	47	96	97	50	126	19	870
68	61	83	86	60	77	98	49	48	95	140	5	870
116	121	117	34	26	115	113	25	31	27	123	22	870
23	109	42	108	38	39	35	105	104	122	135	10	870
33	36	103	37	107	106	110	40	41	112	21	124	870
118	24	28	111	119	30	32	120	114	29	14	131	870
1	143	128	137	133	16	130	7	20	13	3	139	870
144	2	17	8	12	129	15	138	125	132	6	142	870
870	870	870	870	870	870	870	870	870	870	870	870	870

333	12x12	Inder J. Taneja	https://numbers-magic.com/	©IJT	870
25	23	121	119	118	28	116	30	31	114	135	10	870
120	122	24	26	27	117	29	115	33	112	18	127	870
47	98	55	89	88	87	56	60	113	32	9	136	870
97	48	84	62	82	63	65	79	36	109	141	4	870
49	96	78	77	69	70	74	67	110	35	126	19	870
95	50	72	68	75	76	71	73	111	34	140	5	870
94	51	61	80	64	81	83	66	108	37	123	22	870
92	53	85	59	57	58	86	90	38	107	134	11	870
54	91	39	105	41	103	46	44	100	102	21	124	870
52	93	106	40	104	42	99	101	45	43	14	131	870
1	143	128	137	133	16	130	7	20	13	3	139	870
144	2	17	8	12	129	15	138	125	132	6	142	870
870	870	870	870	870	870	870	870	870	870	870	870	870

334	12x12	Inder J. Taneja	https://numbers-magic.com/	©IJT	870
25	23	121	119	118	28	116	30	31	114	135	10	870
120	122	24	26	27	117	29	115	33	112	18	127	870
47	98	60	57	84	90	58	86	108	37	9	136	870
97	48	89	71	76	65	78	56	36	109	141	4	870
49	96	83	66	77	72	75	62	110	35	126	19	870
95	50	81	80	67	74	69	64	111	34	140	5	870
94	51	63	73	70	79	68	82	113	32	123	22	870
92	53	59	88	61	55	87	85	38	107	134	11	870
54	91	39	105	41	103	46	44	100	102	21	124	870
52	93	106	40	104	42	99	101	45	43	14	131	870
1	143	128	137	133	16	130	7	20	13	3	139	870
144	2	17	8	12	129	15	138	125	132	6	142	870
870	870	870	870	870	870	870	870	870	870	870	870	870

340	12x12	Inder J. Taneja	https://numbers-magic.com/	©IJT	870
115	42	94	35	43	40	96	113	118	29	134	11	870
30	103	51	110	102	105	49	32	27	116	14	131	870
107	38	55	89	88	87	56	60	114	31	18	127	870
26	119	84	62	82	63	65	79	97	48	141	4	870
52	93	78	77	69	70	74	67	47	98	126	19	870
28	117	72	68	75	76	71	73	104	41	140	5	870
101	44	61	80	64	81	83	66	50	95	123	22	870
121	24	85	59	57	58	86	90	23	122	135	10	870
25	111	37	46	100	109	92	54	39	112	21	124	870
120	34	108	99	45	36	53	91	106	33	9	136	870
1	143	128	137	133	16	130	7	20	13	3	139	870
144	2	17	8	12	129	15	138	125	132	6	142	870
870	870	870	870	870	870	870	870	870	870	870	870	870

350	12x12	Inder J. Taneja	https://numbers-magic.com/	©IJT	870
65	82	64	79	87	58	54	91	23	122	134	11	870
80	63	81	66	90	55	41	104	118	27	18	127	870
60	83	86	61	56	89	97	48	106	39	9	136	870
85	62	59	84	57	88	44	101	28	117	141	4	870
73	74	75	67	69	77	98	47	121	24	126	19	870
72	71	70	78	76	68	100	45	31	114	140	5	870
103	92	99	43	49	93	51	50	38	107	123	22	870
42	53	46	102	96	52	95	94	120	25	135	10	870
26	40	30	36	112	34	110	116	108	113	21	124	870
119	105	115	109	33	111	35	29	32	37	14	131	870
1	143	128	137	133	16	130	7	20	13	3	139	870
144	2	17	8	12	129	15	138	125	132	6	142	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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113	106	108	120	40	38	36	26	24	114	135	10	870
35	48	42	102	104	91	53	93	47	110	18	127	870
33	45	86	84	57	90	58	60	100	112	9	136	870
29	101	56	71	76	65	78	89	44	116	141	4	870
23	51	62	66	77	72	75	83	94	122	126	19	870
111	46	64	80	67	74	69	81	99	34	140	5	870
115	96	82	73	70	79	68	63	49	30	123	22	870
117	95	85	61	88	55	87	59	50	28	134	11	870
118	98	103	43	41	54	92	52	97	27	21	124	870
31	39	37	25	105	107	109	119	121	32	14	131	870
1	143	128	137	133	16	130	7	20	13	3	139	870
144	2	17	8	12	129	15	138	125	132	6	142	870
870	870	870	870	870	870	870	870	870	870	870	870	870

392 12x12 Inder J. Taneja https://numbers-magic.com/ ©IJT 870

113	106	108	120	40	38	36	26	24	114	141	4	870
29	63	81	84	62	57	88	95	50	116	126	19	870
33	82	64	61	83	86	59	94	51	112	9	136	870
35	53	90	91	56	87	58	52	93	110	18	127	870
23	92	55	54	89	60	85	49	96	122	140	5	870
111	43	101	41	100	98	103	46	48	34	135	10	870
115	102	44	104	45	47	42	99	97	30	123	22	870
117	65	76	70	77	74	72	67	79	28	134	11	870
118	80	69	75	68	71	73	78	66	27	21	124	870
31	39	37	25	105	107	109	119	121	32	14	131	870
128	130	143	137	133	16	20	7	1	13	3	139	870
17	15	2	8	12	129	125	138	144	132	6	142	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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133	124	126	141	143	22	20	18	5	3	1	134	870
17	63	82	55	90	43	102	115	30	35	110	128	870
14	80	65	89	56	101	44	114	31	109	36	131	870
13	81	64	58	87	45	100	29	116	37	108	132	870
8	66	79	88	57	98	47	34	111	107	38	137	870
6	59	85	84	62	99	46	112	33	106	39	139	870
129	86	60	61	83	48	97	32	113	40	105	16	870
130	51	93	92	54	96	49	117	28	104	41	15	870
135	94	52	53	91	50	95	27	118	42	103	10	870
136	67	77	69	75	74	73	23	121	26	120	9	870
138	78	68	76	70	71	72	122	24	119	25	7	870
11	21	19	4	2	123	125	127	140	142	144	12	870
870	870	870	870	870	870	870	870	870	870	870	870	870

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133	124	126	141	143	22	20	18	5	3	1	134	870
17	63	80	81	66	43	102	115	30	35	110	128	870
14	82	65	64	79	101	44	114	31	109	36	131	870
13	55	89	58	88	45	100	29	116	37	108	132	870
8	90	56	87	57	98	47	34	111	107	38	137	870
6	59	85	84	62	99	46	112	33	106	39	139	870
129	86	60	61	83	48	97	32	113	40	105	16	870
130	51	93	92	54	96	49	117	28	104	41	15	870
135	94	52	53	91	50	95	27	118	42	103	10	870
136	67	77	69	75	74	73	23	121	26	120	9	870
138	78	68	76	70	71	72	122	24	119	25	7	870
11	21	19	4	2	123	125	127	140	142	144	12	870
870	870	870	870	870	870	870	870	870	870	870	870	870

423	12x12 Inder J. Taneja https://numbers-magic.com/ ©IJT											870
	133	124	126	141	143	22	20	18	5	3	1	134	870
	17	26	119	116	29	70	75	43	102	47	98	128	870
	14	120	25	30	115	81	64	101	44	97	48	131	870
	13	23	122	117	28	65	80	100	45	96	49	132	870
	8	121	24	27	118	73	72	46	99	50	95	137	870
	6	35	109	108	38	79	66	55	89	88	58	139	870
	129	110	36	37	107	63	82	90	56	57	87	16	870
	130	39	106	31	114	76	69	54	91	84	61	15	870
	135	105	40	113	32	77	68	92	53	62	83	10	870
	136	104	41	112	33	74	71	51	94	85	60	9	870
	138	42	103	34	111	67	78	93	52	59	86	7	870
	11	21	19	4	2	123	125	127	140	142	144	12	870
	870	870	870	870	870	870	870	870	870	870	870	870	870

441	12x12 Inder J. Taneja https://numbers-magic.com/ ©IJT											870
	133	124	126	141	143	22	20	18	5	3	1	134	870
	17	65	82	64	79	57	88	92	53	46	99	128	870
	14	80	63	81	66	90	55	93	52	100	45	131	870
	13	60	83	86	61	56	89	54	91	43	102	132	870
	8	85	62	59	84	87	58	51	94	101	44	137	870
	6	75	67	74	73	69	77	47	97	96	50	139	870
	129	70	78	71	72	76	68	98	48	49	95	16	870
	130	39	105	104	42	35	110	29	118	23	120	15	870
	135	106	40	41	103	109	36	24	119	30	117	10	870
	136	31	34	112	113	108	37	122	25	116	27	9	870
	138	114	111	33	32	38	107	115	28	121	26	7	870
	11	21	19	4	2	123	125	127	140	142	144	12	870
	870	870	870	870	870	870	870	870	870	870	870	870	870

469	12x12 Inder J. Taneja https://numbers-magic.com/ ©IJT											870
	133	124	126	141	143	22	20	18	5	3	1	134	870
	17	68	61	83	56	90	77	98	100	43	49	128	870
	14	71	85	81	64	60	74	99	92	53	46	131	870
	13	76	59	63	82	86	69	48	51	94	97	132	870
	8	70	88	66	79	57	75	44	54	91	101	137	870
	6	78	87	80	65	58	67	50	93	52	95	139	870
	129	72	55	62	89	84	73	96	45	102	47	16	870
	130	23	122	34	27	29	32	117	115	114	112	15	870
	135	121	24	111	118	116	113	28	30	31	33	10	870
	136	26	119	40	109	104	107	106	37	42	35	9	870
	138	120	25	105	36	41	38	39	108	103	110	7	870
	11	21	19	4	2	123	125	127	140	142	144	12	870
	870	870	870	870	870	870	870	870	870	870	870	870	870

481	12x12 Inder J. Taneja https://numbers-magic.com/ ©IJT											870
	133	124	126	141	143	22	20	18	5	3	1	134	870
	17	25	23	121	119	118	28	116	30	31	114	128	870
	14	120	122	24	26	27	117	29	115	33	112	131	870
	13	47	98	65	80	60	85	57	88	113	32	132	870
	8	97	48	82	63	83	62	90	55	111	34	137	870
	6	49	96	64	81	86	59	56	89	110	35	139	870
	129	95	50	79	66	61	84	87	58	36	109	16	870
	130	94	51	75	67	74	73	69	77	108	37	15	870
	135	92	53	70	78	71	72	76	68	38	107	10	870
	136	54	91	39	105	41	103	46	44	100	102	9	870
	138	52	93	106	40	104	42	99	101	45	43	7	870
	11	21	19	4	2	123	125	127	140	142	144	12	870
	870	870	870	870	870	870	870	870	870	870	870	870	870

499	12x12 Inder J. Taneja https://numbers-magic.com/ ©IJT											870
	133	124	126	141	143	22	20	18	5	3	1	134	870
	17	52	94	95	49	48	98	99	45	40	105	128	870
	14	93	51	50	96	97	47	46	100	30	115	131	870
	13	41	103	102	44	53	91	56	90	116	29	132	870
	8	104	42	43	101	92	54	89	55	121	24	137	870
	6	65	79	78	68	64	82	83	61	117	28	139	870
	129	80	66	67	77	81	63	62	84	27	118	16	870
	130	60	86	87	57	69	75	74	72	110	35	15	870
	135	85	59	58	88	76	70	71	73	32	113	10	870
	136	119	107	37	112	31	106	120	34	23	36	9	870
	138	26	38	108	33	114	39	25	111	109	122	7	870
	11	21	19	4	2	123	125	127	140	142	144	12	870
	870	870	870	870	870	870	870	870	870	870	870	870	870

519	12x12 Inder J. Taneja https://numbers-magic.com/ ©IJT											870
	133	124	126	141	143	22	20	18	5	3	1	134	870
	17	113	106	108	120	40	38	36	26	24	114	128	870
	14	35	71	76	65	78	83	62	53	92	110	131	870
	13	33	66	77	72	75	63	82	41	104	112	132	870
	8	29	80	67	74	69	81	64	94	51	116	137	870
	6	23	73	70	79	68	89	56	49	96	122	139	870
	129	111	58	57	84	90	60	86	47	98	34	16	870
	130	115	87	88	61	55	59	85	93	52	30	15	870
	135	117	50	48	102	91	46	101	100	42	28	10	870
	136	118	95	97	43	54	99	44	103	45	27	9	870
	138	31	39	37	25	105	107	109	119	121	32	7	870
	11	21	19	4	2	123	125	127	140	142	144	12	870
	870	870	870	870	870	870	870	870	870	870	870	870	870

529	12x12 Inder J. Taneja https://numbers-magic.com/ ©IJT											870
	133	124	126	141	143	22	20	18	5	3	1	134	870
	17	113	106	108	120	40	38	36	26	24	114	128	870
	14	35	52	94	95	49	48	97	53	92	110	131	870
	13	33	93	51	50	96	98	47	91	54	112	132	870
	8	29	41	103	102	44	99	46	90	55	116	137	870
	6	23	104	42	43	101	45	100	56	89	122	139	870
	129	111	65	80	60	85	64	82	83	61	34	16	870
	130	115	79	66	86	59	81	63	62	84	30	15	870
	135	117	78	67	87	58	69	75	74	72	28	10	870
	136	118	68	77	57	88	76	70	71	73	27	9	870
	138	31	39	37	25	105	107	109	119	121	32	7	870
	11	21	19	4	2	123	125	127	140	142	144	12	870
	870	870	870	870	870	870	870	870	870	870	870	870	870

536	12x12 Inder J. Taneja https://numbers-magic.com/ ©IJT											870
	133	124	126	141	143	22	20	18	5	3	1	134	870
	17	113	106	108	120	40	38	36	26	24	114	128	870
	14	35	76	72	67	79	74	70	65	77	110	131	870
	13	33	63	62	84	81	57	88	52	93	112	132	870
	8	29	82	83	61	64	86	59	95	50	116	137	870
	6	23	53	91	90	56	87	58	94	51	122	139	870
	129	111	92	54	55	89	60	85	49	96	34	16	870
	130	115	103	41	43	101	100	98	46	48	30	15	870
	135	117	42	104	102	44	45	47	99	97	28	10	870
	136	118	69	73	78	66	71	75	80	68	27	9	870
	138	31	39	37	25	105	107	109	119	121	32	7	870
	11	21	19	4	2	123	125	127	140	142	144	12	870
	870	870	870	870	870	870	870	870	870	870	870	870	870

Above there are only few examples. As written above total there are 634 magic square of order 12 constructed by the author. These are available at author's site [4].

6 Author's Contribution to Magic Squares and Recreation Numbers

For author's contribution to **magic squares** and **recreation numbers** please see the links below:

- **Inder J. Taneja**, Magic Squares, *https://inderjtaneja.com/2019/06/27/publications-magic-squares/*
- **Inder J. Taneja**, Recreation of Numbers, *https://inderjtaneja.com/2019/06/27/publications-recreation-of-numbers/*

References

[1] **H. White**, Bordered Magic Squares - *http://budshaw.ca/Download.html*

[2] **Inder J. Taneja**, Even Order Striped Magic Squares, *https://numbers-magic.com/?p=10587*

[3] **Inder J. Taneja**, Even Order Striped Magic Squares, *https://numbers-magic.com/?p=2576*

[4] **Inder J. Taneja**, Different Types of Magic Squares of Order 12, *https://numbers-magic.com/?p=2598*

• Block-Wise Magic Squares

[5] **Inder J. Taneja**, Block-Wise Constructions of Magic and Bimagic Squares of Orders 8 to 108, May 15, 2019, pp. 1-43, **Zenodo**, *http://doi.org/10.5281/zenodo.2843326*.

[6] **Inder J. Taneja**, Block-Wise Equal Sums Pandiagonal Magic Squares of Order 4k, **Zenodo**, January 31, 2019, pp. 1-17, *http://doi.org/10.5281/zenodo.2554288*.

[7] **Inder J. Taneja**, Magic Rectangles in Construction of Block-Wise Pandiagonal Magic Squares, **Zenodo**, January 31, 2019, pp. 1-49, *http://doi.org/10.5281/zenodo.2554520*.

[8] **Inder J. Taneja**, Block-Wise Equal Sums Magic Squares of Orders 3k and 6k, **Zenodo**, February 1, 2019, pp. 1-55, *http://doi.org/10.5281/zenodo.2554895*.

[9] **Inder J. Taneja**, Block-Wise Unequal Sums Magic Squares, **Zenodo**, February 1, 2019, pp. 1-52, *http://doi.org/10.5281/zenodo.2555260*.

[10] **Inder J. Taneja**, Block-Wise Magic and Bimagic Squares of Orders 12 to 36, **Zenodo**, February 1, 2019, pp. 1-53, *http://doi.org/10.5281/zenodo.2555343*.

[11] **Inder J. Taneja**, Block-Wise Magic and Bimagic Squares of Orders 39 to 45, **Zenodo**, February 2, 2019, pp. 1-73, *http://doi.org/10.5281/zenodo.2555889*.

• Bordered Magic Squares

[12] **Inder J. Taneja**, Nested Magic Squares With Perfect Square Sums, Pythagorean Triples, and Borders Differences, **Zenodo**, June 14, 2019, pp. 1-59, *http://doi.org/10.5281/zenodo.3246586*.

[13] **Inder J. Taneja**, Symmetric Properties of Nested Magic Squares, **Zenodo**, June 29, 2019, pp. 1-55, *http://doi.org/10.5281/zenodo.3262170*.

[14] **Inder J. Taneja**, General Sum Symmetric and Positive Entries Nested Magic Squares, **Zenodo**, July 04, 2019, pp. 1-55, *http://doi.org/10.5281/zenodo.3268877*.

[15] **Inder J. Taneja**, Bordered Magic Squares With Order Square Magic Sums, **Zenodo**, January 20, 2020, pp. 1-26, *http://doi.org/10.5281/zenodo.3613690*.

[16] **Inder J. Taneja**, Fractional and Decimal Type Bordered Magic Squares With Magic Sum 2020. **Zenodo**, January 20, 2020, pp.1-25. *http://doi.org/10.5281/zenodo.3613698*.

[17] **Inder J. Taneja**, Fractional and Decimal Type Bordered Magic Squares With Magic Sum 2021, **Zenodo**, December 16, 2020, pp. 1-33, *http://doi.org/10.5281/zenodo.4327333*.

[18] **Inder J. Taneja**, Inder J. Taneja, Block-Wise and Block-Bordered Magic Squares With Magic Sum 2022, **Zenodo**, December 28, 2021, pp. 1-38, *https://doi.org/10.5281/zenodo.5807789*

• Block-Bordered Magic Squares

[19] **Inder J. Taneja**, Block-Bordered Magic Squares of Prime and Double Prime Numbers - I, **Zenodo**, August 18, 2020, pp. 1-81, *http://doi.org/10.5281/zenodo.3990291*.

[20] **Inder J. Taneja**, Block-Bordered Magic Squares of Prime and Double Prime Numbers - II, **Zenodo**, August 18, 2020, pp. 1-90, *http://doi.org/10.5281/zenodo.3990293*.

[21] **Inder J. Taneja**, Block-Bordered Magic Squares of Prime and Double Prime Numbers - III, **Zenodo**, September 01, 2020, pp. 1-93, *http://doi.org/10.5281/zenodo.4011213*.

• Block-Wise and Block-Bordered Magic Squares

[22] **Inder J. Taneja**, Block-Wise and Block-Bordered Magic and Bimagic Squares With Magic Sums 21, 21^2 and 2021. **Zenodo**, December 16, 2020, pp. 1-118, *http://doi.org/10.5281/zenodo.4380343*.

[23] **Inder J. Taneja**, Block-Wise and Block-Bordered Magic and Bimagic Squares of Orders 10 to 47. **Zenodo**, January 14, 2021, pp. 1-185, *http://doi.org/10.5281/zenodo.4437783*.

[24] **Inder J. Taneja**, Bordered and Block-Wise Bordered Magic Squares: Odd Order Multiples, **Zenodo**, Feburary 10, 2021, pp. 1-75, *http://doi.org/10.5281/zenodo.4527739*

[25] **Inder J. Taneja**, Bordered and Block-Wise Bordered Magic Squares: Even Order Multiples, **Zenodo**, Feburary 10, 2021, pp. 1-96, *http://doi.org/10.5281/zenodo.4527746*

• Bordered Magic Squares Multiples of Even Order Magic Squares

[26] **Inder J. Taneja**, Block-Wise Bordered and Pandiagonal Magic Squares Multiples of 4, **Zenodo**, August 31, 2021, pp. 1-148, *https://doi.org/10.5281/zenodo.5347897*.

[27] **Inder J. Taneja**, Bordered Magic Squares Multiples of 6, **Zenodo**, July 25, 2023, pp. 1-32, *https://doi.org/10.5281/zenodo.8184983*.

[28] **Inder J. Taneja**, Bordered and Pandiagonal Magic Squares Multiples of 8, **Zenodo**, July 26, 2023, pp. 1-58, *https://doi.org/10.5281/zenodo.8187791*.

[29] **Inder J. Taneja**, Bordered Magic Squares Multiples of 10, **Zenodo**, July 26, pp. 1-40, *https://doi.org/10.5281/zenodo.8187888*.

[30] **Inder J. Taneja**, Bordered and Pandiagonal Magic Squares Multiples of 12, **Zenodo**, July 27, 2023, pp. 1-31, *https://doi.org/10.5281/zenodo.8188293*.

[31] **Inder J. Taneja**, Bordered Magic Squares Multiples of 14, **Zenodo**, July 27, pp. 1-33, *https://doi.org/10.5281/zenodo.8188395*.

[32] **Inder J. Taneja**, Bordered and Pandiagonal Magic Squares Multiples of 16, **Zenodo**, July 27, pp. 1-30, *https://doi.org/10.5281/zenodo.8190884*.

[33] **Inder J. Taneja**, Bordered Magic Squares Multiples of 18, **Zenodo**, July 28, pp. 1-31, *https://doi.org/10.5281/zenodo.8191223*.

[34] **Inder J. Taneja**, Bordered and Pandiagonal Magic Squares Multiples of 20, **Zenodo**, July 28, pp. 1-45, *https://doi.org/10.5281/zenodo.8191426*.

• Bordered Magic Squares Multiples of Odd Order Magic Squares

[35] **Inder J. Taneja**, Block-Wise Bordered and Pandiagonal Magic Squares Multiples of 3, **Zenodo**, May 05, pp. 1-29, 2023, *https://doi.org/10.5281/zenodo.7898383*.

[36] **Inder J. Taneja**, Bordered and Pandiagonal Magic Squares Multiples of 5, **Zenodo**, July 23, 2023, pp. 1-36, *https://doi.org/10.5281/zenodo.8175759*.

[37] **Inder J. Taneja**, Bordered and Pandiagonal Magic Squares Multiples of 7, **Zenodo**, July 23, pp. 1-34, 2023, *https://doi.org/10.5281/zenodo.8176061*.

[38] **Inder J. Taneja**, Bordered Magic Squares Multiples of 9, **Zenodo**, July 23, 2023, pp. 1-28, *https://doi.org/10.5281/zenodo.8176357*.

[39] **Inder J. Taneja**, Bordered Magic Squares Multiples of 11, **Zenodo**, July 24, pp. 1-34, 2023, *https://doi.org/10.5281/zenodo.8176475*.

[40] **Inder J. Taneja**, Bordered Magic Squares Multiples of 13, **Zenodo**, July 24, pp. 1-32, 2023, *https://doi.org/10.5281/zenodo.8178879*.

[41] **Inder J. Taneja**, Bordered Magic Squares Multiples of 15, **Zenodo**, July 24, pp. 1-35, 2023, *https://doi.org/10.5281/zenodo.8178935*.

[42] **Inder J. Taneja**, Bordered Magic Squares Multiples of 17, **Zenodo**, July 25, pp. 1-26, 2023, *https://doi.org/10.5281/zenodo.8180706*.

[43] **Inder J. Taneja**, Bordered Magic Squares Multiples of 19, **Zenodo**, July 25, pp. 1-31, 2023, *https://doi.org/10.5281/zenodo.8180919*.

• Magic Squares With Bordered Magic Rectangles

[44] **Inder J. Taneja**, Different Styles of Magic Squares of Orders 6, 8, 10 and 12 Using Bordered Magic Rectangles, **Zenodo**, November 14, 2022, pp. 1-26, *https://doi.org/10.5281/zenodo.7319985*.
Revised - Different Types of Magic Squares of Orders 6, 8, 10 and 12, **Zenodo**, November 03, 2023, pp. 1-41, *https://doi.org/10.5281/zenodo.10080859*.

[45] **Inder J. Taneja**, Different Styles of Magic Squares of Order 14 Using Bordered Magic Rectangles, **Zenodo**, November 14, 2022, pp. 1-40, *https://doi.org/10.5281/zenodo.7319787*.

[46] **Inder J. Taneja**, Different Styles of Magic Squares of Order 16 Using Bordered Magic Rectangles, **Zenodo**, November 14, 2022, pp. 1-63, *https://doi.org/10.5281/zenodo.7320116*.

[47] **Inder J. Taneja**, Different Styles of Magic Squares of Order 18 Using Bordered Magic Rectangles, **Zenodo**, November 14, 2022, pp. 1-85, *https://doi.org/10.5281/zenodo.7320131*.

[48] **Inder J. Taneja**, Different Styles of Magic Squares of Order 20 Using Bordered Magic Rectangles, **Zenodo**, November 14, 2022, pp. 1-88, *https://doi.org/10.5281/zenodo.7320877*.

[49] **Inder J. Taneja**, Few Examples of Magic Squares of Even Orders 6 to 18 Using Bordered Magic Rectangles, **Zenodo**, October 19, 2022, pp. 1-30, *https://doi.org/10.5281/zenodo.7225854*.

[50] **Inder J. Taneja**, Few Examples of Magic Squares of Even Orders 20 to 30 Using Bordered Magic Rectangles, **Zenodo**, October 19, 2022, pp. 1-100, *https://doi.org/10.5281/zenodo.7225886*.

[51] **Inder J. Taneja**, Single Crossed Bordered Magic Rectangles and Magic Squares of Order 40, **Zenodo**, January 24, 2023, pp. 1-76, *https://doi.org/10.5281/zenodo.7565946*

[52] **Inder J. Taneja**, Double Crossed Bordered Magic Rectangles and Magic Squares of Order 40, **Zenodo**, January 30, 2023, pp. 1-102, *https://doi.org/10.5281/zenodo.7585787*

[53] **Inder J. Taneja**, Magic Squares of Order 42 Using Bordered Magic Rectangles: A Systematic Procedure, **Zenodo**, March 03, 2023, pp. 1-92, *https://doi.org/10.5281/zenodo.7695834*.

[54] **Inder J. Taneja**, Single-Cross Bordered Magic Rectangles and Magic Squares of Order 42, **Zenodo**, March 03, 2023, pp. 1-69, *https://doi.org/10.5281/zenodo.7695939*

[55] **Inder J. Taneja**, Double-Cross Bordered Magic Rectangles and Magic Squares of Order 42, **Zenodo**, March 03, 2023, pp. 1-59, *https://doi.org/10.5281/zenodo.7696070*.

[56] **Inder J. Taneja**, Closed Double-Cross Bordered Magic Rectangles and Magic Squares of Order 42, **Zenodo**, March 03, 2023, pp. 1-28, *https://doi.org/10.5281/zenodo.7696181*.

[57] **Inder J. Taneja**, 8000+ Magic Squares of Order 22 in Different Styles, Models and Designs, **Zenodo**, April 08, pp. 1-135, *https://doi.org/10.5281/zenodo.7809478*.

• Figured Magic Squares and Bordered Magic Rectangles

[58] **Inder J. Taneja**, Figured Magic Squares of Orders 6, 10, 12, 14 and 16 Using Bordered Magic Rectangles: A Systematic Procedure, **Zenodo**, November 29, 2022, pp. 1-31, *https://doi.org/10.5281/zenodo.7377674*.

[59] **Inder J. Taneja**, Figured Magic Squares of Orders 18 and 20 Using Bordered Magic Rectangles: A Systematic Procedure, **Zenodo**, November 29, 2022, pp. 1-87, *https://doi.org/10.5281/zenodo.7377689*.

[60] **Inder J. Taneja**, Figured Magic Squares of Order 22 Using Bordered Magic Rectangles: A Systematic Procedure, **Zenodo**, November 29, 2022, pp. 1-61, *https://doi.org/10.5281/zenodo.7377706*.

[61] **Inder J. Taneja**, Figured Magic Squares of Order 24 Using Bordered Magic Rectangles: A Systematic Procedure, **Zenodo**, November 29, 2022, pp. 1-104, *https://doi.org/10.5281/zenodo.7377779*.

[62] **Inder J. Taneja**, Figured Magic Squares of Order 26 Using Bordered Magic Rectangles: A Systematic Procedure, **Zenodo**, November 29, 2022, pp. 1-88, *https://doi.org/10.5281/zenodo.7377794*.

[63] **Inder J. Taneja**, Figured Magic Squares of Order 28 Using Bordered Magic Rectangles: A Systematic Procedure, **Zenodo**, December 02, 2022, pp. 1-179, *https://doi.org/10.5281/zenodo.7390666*.

[64] **Inder J. Taneja**, Figured Magic Squares of Order 30 Using Bordered Magic Rectangles: A Systematic Procedure, **Zenodo**, December 02, 2022, pp. 1-179, *https://doi.org/10.5281/zenodo.7390705*.

[65] **Inder J. Taneja**, Figured Magic Squares of Order 32 Using Bordered Magic Rectangles: A Systematic Procedure, **Zenodo**, December 22, 2022, pp. 1-310, *https://doi.org/10.5281/zenodo.7472891*.

[66] **Inder J. Taneja**, Figured Magic Squares of Order 34 Using Bordered Magic Rectangles: A Systematic Procedure, **Zenodo**, December 27, 2022, pp. 1-193, *https://doi.org/10.5281/zenodo.7486540*.

[67] **Inder J. Taneja**, Figured Magic Squares of Order 36 Using Bordered Magic Rectangles: A Systematic Procedure, **Zenodo**, December 27, 2022, pp. 1-140, *https://doi.org/10.5281/zenodo.7486548*.

[68] **Inder J. Taneja**, Figured Magic Squares of Order 38 Using Bordered Magic Rectangles: A Systematic Procedure, **Zenodo**, January 03, 2023, pp. 1-133, *https://doi.org/110.5281/zenodo.7500188*.

[69] **Inder J. Taneja**, Figured Magic Squares of Order 40 Using Bordered Magic Rectangles: A Systematic Procedure, **Zenodo**, January 03, 2023, pp. 1-157, *https://doi.org/10.5281/zenodo.7500192*.

• Double Digits Bordered Magic Squares

[70] **Inder J. Taneja**, Two Digits Bordered Magic Squares Multiples of 4: Orders 8 to 24, **Zenodo**, April, 26, 2023, pp. 1-43, *https://doi.org/10.5281/zenodo.7866956*.

[71] **Inder J. Taneja**, Two Digits Bordered Magic Squares of Orders 28 and 32, **Zenodo**, April, 26, 2023, pp. 1-36, *https://doi.org/10.5281/zenodo.7866981*.

[72] **Inder J. Taneja**, Two Digits Bordered Magic Squares of Orders 10, 14, 18 and 22, **Zenodo**, April, 30, 2023, pp. 1-43, *https://doi.org/10.5281/zenodo.7880931*.

[73] **Inder J. Taneja**, Two Digits Bordered Magic Squares of Orders 26 and 30, **Zenodo**, April, 30, 2023, pp. 1-45, *https://doi.org/10.5281/zenodo.7880937*.

[74] **Inder J. Taneja**, Two Digits Bordered Magic Squares of Orders 36 and 40, **Zenodo**, May, 04, 2023, pp. 1-41, *https://doi.org/10.5281/zenodo.7896709*.

[75] **Inder J. Taneja**, Two digits Bordered Magic Squares of Orders 34 and 38, **Zenodo**, May 10, 2023, pp. 1-45, *https://doi.org/10.5281/zenodo.7922571*.

• Odd Order Magic Squares

[76] **Inder J. Taneja**, Odd Order Magic Squares: Orders 3 to 15, **Zenodo**, June 15, 2023, pp. 1-43, *https://doi.org/10.5281/zenodo.8043030*.

[77] **Inder J. Taneja**, Magic Squares of Orders 17 and 19, **Zenodo**, June 15, 2023, pp. 1-38, *https://doi.org/10.5281/zenodo.8043105*.

[78] **Inder J. Taneja**,Magic Squares of Orders 21 and 23, **Zenodo**, June 15, 2023, pp. 1-43, *https://doi.org/10.5281/zenodo.8043198*.

[79] **Inder J. Taneja**,Magic Squares of Order 25, **Zenodo**, June 15, 2023, pp. 1-27, *https://doi.org/10.5281/zenodo.8043228*.

[80] **Inder J. Taneja**,Magic Squares of Order 27, **Zenodo**, August 06, 2023, pp. 1-32, *https://doi.org/10.5281/zenodo.8218291*.

[81] **Inder J. Taneja**,Magic Squares of Order 29, **Zenodo**, August 06, 2023, pp. 1-30, *https://doi.org/10.5281/zenodo.8218771*.

[82] **Inder J. Taneja**,Magic Squares of Order 31, **Zenodo**, August 06, 2023, pp. 1-35, *https://doi.org/10.5281/zenodo.8219053*.

[83] **Inder J. Taneja**, Double Digits Even and Odd Orders Bordered Magic Squares - Summary, *https://numbers-magic.com/?p=9406*.

[84] **Inder J. Taneja**, New Concepts in Magic Squares: Double Digits Bordered Magic Squares of Orders 7 to 108, **Zenodo**, August 09, 2023, pp. 1-30, *https://doi.org/10.5281/zenodo.8230214*.

• Cornered Magic Squares

[85] **Inder J. Taneja**, Cornered Magic Squares of Order 6, **Zenodo**, May 23, 2023, pp. 1-23, *https://doi.org/10.5281/zenodo.7960679*.

[86] **Inder J. Taneja**, Cornered Magic Squares of Orders 5 to 13, **Zenodo**, June 03, 2023, pp. 1-71, *https://doi.org/10.5281/zenodo.8000467*.

[87] **Inder J. Taneja**, Cornered Magic Squares of Orders 14 to 24, **Zenodo**, June 03, 2023, pp. 1-39, *https://doi.org/10.5281/zenodo.8000471*.

[88] **Inder J. Taneja**, New Concepts in Magic Squares: Cornered Magic Squares of Orders 5 to 81, **Zenodo**, August 09, 2023, pp. 1-27, *https://doi.org/10.5281/zenodo.8231157*.

[89] **Inder J. Taneja**, Striped Magic Squares of Even Orders 6, 8, 10 and 12, **Zenodo**, October 31, 2023, pp. 1-31, *https://doi.org/10.5281/zenodo.10056670*.

• Magic Sequares with Cornered Magic Rectangles

[90] **Inder J. Taneja**, Different Types of Magic Rectangles, **Zenodo**, September 04, 2023, pp. 1-26, *https://doi.org/10.5281/zenodo.8316719*.

[91] **Inder J. Taneja**, Different Types of Magic Rectangles in Construction of Magic Squares of Orders 14 and 18, **Zenodo**, September 10, 2023, pp. 1-32, *https://doi.org/10.5281/zenodo.8331709*.

[92] **Inder J. Taneja**, Different Types of Magic Rectangles in Construction of Magic Squares of Order 22, **Zenodo**, September 10, 2023, pp. 1-36, *https://doi.org/10.5281/zenodo.8331743*.

[93] **Inder J. Taneja**, Different Types of Magic Rectangles in Construction of Magic Squares of Order 26, **Zenodo**, September 10, 2023, pp. 1-39, *https://doi.org/10.5281/zenodo.8331750*.

[94] **Inder J. Taneja**, Different Types of Magic Rectangles in Construction of Magic Squares of Order 30, **Zenodo**, September 10, 2023, pp. 1-44, *https://doi.org/10.5281/zenodo.8331755*.

[95] **Inder J. Taneja**, Different Types of Magic Rectangles in Construction of Magic Squares of Order 34, **Zenodo**, September 10, 2023, pp. 1-49, *https://doi.org/10.5281/zenodo.8331759*.

[96] **Inder J. Taneja**, Cornered Magic Squares in Construction of Magic Squares of Orders 16, 20, 24 and 28, **Zenodo**, September 10, 2023, pp. 1-35, *https://doi.org/10.5281/zenodo.8332156*.

• Creative Magic Squares

[97] **Inder J. Taneja**, Creative Magic Squares: Area Representations, **Zenodo**, June 22, pp. 1-45, 2021, *http://doi.org/10.5281/zenodo.5009224*.

[98] **Inder J. Taneja**, Creative Magic Squares: Area Representations with Fraction Numbers Entries (Version 2), **Zenodo**, August 16, 2021, 1-77, *https://doi.org/10.5281/zenodo.5209502*.